Route 37 Priority Corridor Study in Braintree

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Project Manager
Seth Asante

Project Principal
Rounaq Basu

Data Analysts
Julie Dombroski
Kathy Jacob

Graphics
Kenneth Dumas
Kim DeLauri

Editor
David Davenport

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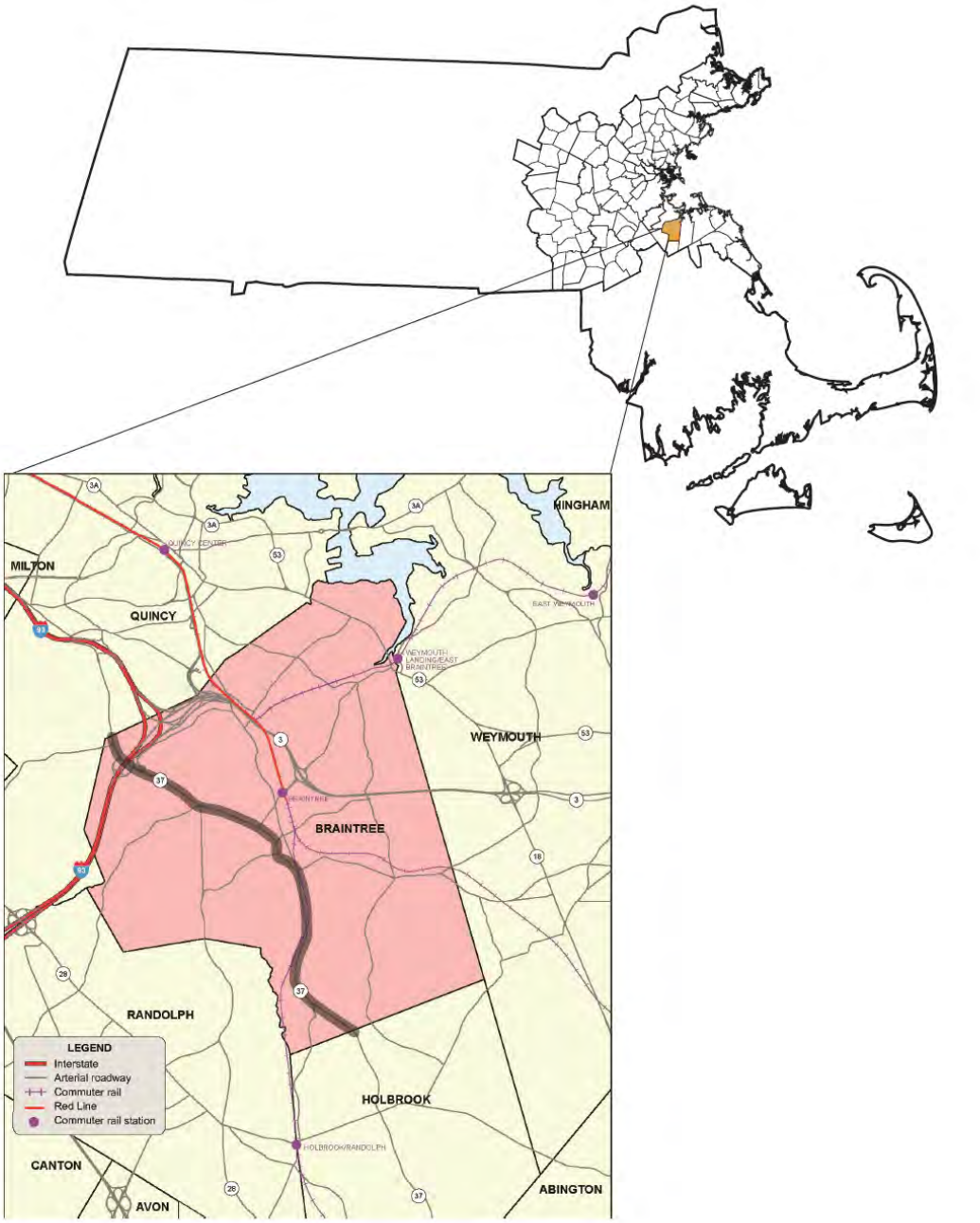

For general inquiries, contact

Central Transportation Planning Staff
State Transportation Building
Ten Park Plaza, Suite 2150
Boston, Massachusetts 02116

857.702.3700
ctps@ctps.org
ctps.org

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Abstract

The Metropolitan Planning Organization (MPO) corridor studies are part of the Multimodal Mobility and Infrastructure Program. The program goals are to address gaps in regional and community multimodal needs towards a safe and accessible regional transportation system. Staff to the Boston Region MPO prioritized Route 37 in Braintree for study after considering several factors, including the need to address poor safety conditions, the desire to enhance multimodal transportation, and the potential to serve transportation equity populations and prioritize the needs of marginalized communities. This report details the existing conditions, assesses safety and operational problems, discusses improvement options, and recommends implementing improvements. The recommendations, if implemented, would improve safety and multimodal transportation to support the land uses and local businesses along the corridor. In addition, the recommendations would make traffic flow and operations efficient, support bus service, and provide a welcoming environment for people walking, biking, and using assistive mobility devices.

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Executive Summary

ES.1 BACKGROUND

Metropolitan Planning Organization (MPO) corridor studies are part of the Multimodal Mobility and Infrastructure Program. The program goals are to address gaps in regional and community multimodal needs towards a safe and accessible regional transportation system. These gaps include safety, congestion, and multimodal mobility and accessibility issues and the studies focus on exploring strategies to address these challenges and enhance multimodal transportation modes such as increasing safety and quality of infrastructure for nonmotorized modes.

The MPO staff selected Route 37 in Braintree as the subject of a corridor study in the federal fiscal year 2023. The location was prioritized for study after considering several factors, including addressing poor safety conditions and traffic congestion, the desire to enhance multimodal transportation, the potential to serve transportation equity populations and marginalized communities, and the need to maintain regional travel capacity. Past MPO corridor studies include Route 114 in Danvers, Route 203 in Boston, Route 30 in Framingham and Natick, Route 140 in Franklin, Route 16 in Chelsea and Everett, Route 9 in Framingham and Natick, and Route 1 in Norwood. Many of the recommendations from the studies have been implemented. These corridor studies give the municipalities and the Massachusetts Department of Transportation (MassDOT) what would be required to address deficiencies in the corridors before committing to design and engineering. In addition, the studies strive to build consensus among the stakeholders and enhance the planning and design of multimodal transportation infrastructure.

ES.2 COMMUNITY ENGAGEMENT

Stakeholder participation was a crucial part of the study. MPO staff used several methods to engage stakeholders in planning improvements to Route 37 Braintree. An advisory committee of representatives from the MassDOT, Massachusetts Bay Transportation Authority (MBTA), Braintree Schools, and South Shore Chamber of Commerce was established to guide this study. Staff met with the advisory committee to kick off the study. In a second meeting, MPO staff presented the existing problems, corridor needs, and ideas for improvements for feedback. This report reflects the committee's feedback. Appendix A includes a list of task force members and comments.

In addition, staff engaged Braintree residents by launching a community survey to help determine the public's opinion about concerns and problems on Route 37

and to learn their ideas for resolving them. The online survey, posted on the Town of Braintree's websites, received 300 responses between July and August 2023. The survey questionnaire is included in Appendix A.

ES.3 EXISTING CONDITIONS AND NEEDS ASSESSMENT

With the assistance of the MassDOT Highway Division, MPO staff collected and assembled a wide range of data. Staff analyzed the data, and conducted community surveys to assess the existing conditions, identify the deficiencies, and determine the corridor needs for existing conditions and intended future uses. The process ensures that the recommendations are well informed and that all perspectives are considered.

Key concerns include poor quality sidewalks, pedestrian crossing safety issues, gaps in the sidewalk network, lack of infrastructure for biking, infrastructure noncompliance with the Americans with Disabilities Act (ADA), and high speeds of vehicles that create high-stress levels for people walking or biking. Although there are bikeable shoulders on Route 37, especially on Washington and Hancock Streets south of the corridor, they need to be marked as bike lanes and have consistent width. In addition, the shoulders end near signalized intersections, where they transition into turn lanes. There needs to be a safe transition from bike lanes into shared lanes. In addition, a considerable variation in posted speed limits throughout the corridor (25 miles per hour [mph] to 40 mph) increases stress levels for people biking.

Another key concern for users in the corridor is safety. The corridor has

- two high-crash sites eligible for Highway Safety Improvement Program funding,
- several sites with higher-than-expected number of crashes that must be prioritized for potential safety investments, and
- several top-risk sites involving risk factors such as pedestrian and bicycle, distracted and impaired driving, and younger and older drivers.

People riding the bus are challenged in the corridor in many ways, similar to walking or biking. A critical concern for people who ride the bus is delays, which affect travel time and on-time performance. Improving bus service reliability and infrastructure such as adding bus priority signals, dedicated bus stops, and safe crossing opportunities can increase ridership and prioritize needs of transportation equity populations in the corridor.

ES.4 IMPROVEMENTS

MPO staff considered feedback from the advisory committee and input from the community to develop near- and long-term improvements for the corridor.

Near-Term Improvements

The near-term improvements are generally low cost, relatively uncomplicated to implement, require minimal design efforts, and typically take fewer than five years to implement. These improvements can be included in some of MassDOT's corridor projects or through maintenance activities. The near-term recommendations include repairing sidewalks and curb ramps to meet MassDOT standards and comply with the ADA guidelines; adding countdown timers to help expedite safe pedestrian crossings; painting high-visibility crosswalks; repainting faded pavement markings; and installing advance notification signage. Additional near-term improvements include several signal upgrades: retiming signals to reduce congestion, modifying change and clearance intervals to meet MassDOT standards, and adding yellow retroreflective borders to backplates to make the signals more visible at night.

Long-Term Improvements

Long-term improvements are generally costly and require more design and engineering efforts. The recommendations for long-term improvements focus on modernizing the roadway to make it safer and multimodal. They include closing substantial gaps in the sidewalk network, adding protected or separated bike lanes, designing bus turnouts into bike lanes, and upgrading signal equipment to include bus priority signals. These long-term improvements and the proposed Braintree Complete Streets Program would increase transportation choices in the corridor to connect people to the office and industrial parks and commercial, educational, and recreational areas.

ES.5 CONCLUSION

The improvements and concepts developed in this study provide MassDOT, the Town of Braintree, and other stakeholders an opportunity to review the recommendations for addressing deficiencies in the corridor before committing design and engineering funds to a roadway improvement project. This document provides a guide for possible improvements on this roadway and the necessary information for the project proponents to initiate the project notification and review process. The stakeholders must coordinate with MassDOT to prioritize and advance the recommendations into projects. MassDOT and the Town of Braintree are not obligated to make these improvements.

If implemented, the proposed improvements offered in this report would increase traffic safety, make traffic operations more efficient, and modernize the roadway to accommodate all users. The study aligns with the Boston Region MPO's goals of increasing safety on the region's highway system, modernizing roadways to improve capacity and mobility by expanding the quantity and quality of walking and bicycling infrastructure, making transit service more efficient, reducing congestion, and preserving the transportation system.

Chapter 1—Introduction

1.1 STUDY ORIGIN

The Boston Region Metropolitan Planning Organization (MPO) has been conducting studies of roadway corridors identified through the Multimodal Mobility Infrastructure Program as needing improvements to address gaps in regional safety, multimodal transportation, transportation equity issues, and operational problems. The studies strive to build consensus among the stakeholders and enhance the planning and design of multimodal transportation infrastructure. The study's recommendations are sent to implementing agencies, which may fund improvements through various federal, state, and local sources, separately or in combination.

Past MPO corridor studies include Route 114 in Danvers, Route 203 in Boston, Route 30 in Framingham and Natick, Route 140 in Franklin, Route 16 in Chelsea and Everett, Route 9 in Framingham and Natick, and Route 1 in Norwood. Many of the recommendations from the studies have been implemented. Municipalities in the region and the Massachusetts Department of Transportation (MassDOT) have been receptive to these studies, which provide the opportunity to review conceptual options to improve a specific corridor before committing design and engineering funds to a project. Many of the studied corridors have advanced into projects, into construction, or have been implemented.

Suppose a proponent initiates a project that qualifies for state and federal funds. In that case, the study’s documentation may be helpful to both MassDOT and the project proponent for completing MassDOT Highway Division’s project initiation forms, identifying problems along the corridor, justifying the need for improvements, and providing improvement concepts to advance into the preliminary design and engineering stages. MassDOT initiates new projects through a formal three-step process using the Massachusetts Project Intake Tool (MaPIT) to identify the project needs, define project scope (initiation), and submit the project to the project review committee for approval.[1]

1.2 REPORT ORGANIZATION

This report is organized into five chapters. Chapter 1 presents an overview of MPO corridor studies and includes a summary of how corridors are selected for study, the goals and objectives for the study, and a summary of the community engagement process. Chapter 2 describes the characteristics of Route 37 and the study area's context. Chapter 3 focuses on evaluating the baseline conditions

[1] MassDOT Highway initiating a project | Mass.gov

that will inform the development of the study's purpose and needs. Chapter 4 presents the near-term and long-term corridor improvements that are consistent with the purpose and needs of the corridor and their safety and operational benefits. Chapter 5 focuses on the implementation process to advance the planning study recommendations into projects and the next steps.

1.3 STUDY APPROACH AND SELECTION PROCESS

The approach to corridor studies begins with the establishment of a universe of corridors. The MPO staff reaches out to the subregional committees, municipalities, and other stakeholders to identify corridors of interest. In addition, MPO staff reviews the Long-Range Transportation Planning Needs Assessment and refers to the MassDOT Impact Portal and GeoDOT, MPO congestion management process, and other tools to identify corridors of interest. Once the universe of corridors is established, MPO staff screens the study locations using established criteria like the Transportation Improvement Program scoring process. Staff prioritizes the corridors based on the following criteria: safety conditions, congested conditions, multimodal significance, regional significance, transportation equity, geographical distribution, and implementation potential.[2]

[2] Safety Conditions: The location has a higher-than-average crash rate for its functional class; contains a crash cluster that makes it eligible for Highway Safety Improvement Program funding; contains a crash location on MassDOT Highway Division's Top High Crash Locations Report; or has a significant number of pedestrian and bicycle crashes (two or more per mile).

Congested Conditions: The travel time index is at least 1.3. The travel time index is the ratio of the peak-period travel time to the free-flow travel time.

Multimodal Significance: The roadway carries one or more bus routes or is adjacent to a transit stop or station; it supports bicycle or pedestrian activities, or a project is planned to support these activities; it needs to accommodate pedestrians and bicyclists and improve transit on the roadway; or it has a significant amount of truck traffic serving regional commerce.

Regional Significance: The roadway is on the National Highway System; carries a significant portion of regional traffic (average daily traffic of 20,000 vehicles or more); lies within 0.5 miles of environmental-justice transportation analysis areas or zones; or is essential for the region's economic, cultural, or recreational development.

Transportation Equity: The roadway serves transportation equity populations and prioritizes the needs of marginalized communities. Improvements would eliminate the barriers to access and harmful transportation impacts experienced by these communities.

Geographical Distribution: To ensure that, over time, all subregions in the MPO's planning area receive support from the MPO in the form of UPWP planning studies, during each funding cycle, MPO staff select no more than one location per subregion to study and choose a location in a different subregion from the location studied in the preceding cycle.

Implementation Potential: The study location is proposed by the jurisdictional agency or agencies for the roadway, proposed or prioritized by a subregional group, or identified as a priority for improvement by other stakeholders.

Staff selects a corridor for study considering agency, municipal, subregional, and other public feedback. Once staff selects a study location, an advisory task force comprising of the municipality, MassDOT, business chamber/major employers, school district is established to guide the study.

1.4 STUDY LOCATION

Following the above selection process, MPO staff identified Route 37 in the Town of Braintree for study. The study location was selected from a list of 43 arterial segments in 33 municipalities in the Boston Region MPO area. MassDOT Highway Division District 6, the MassDOT Office of Transportation Planning, the Town of Braintree, Braintree Schools, and the South Shore Chamber of Commerce supported the study by collecting data needed for the analyses and reviewing study documents.

1.5 STUDY GOALS AND OBJECTIVES

The stakeholders have shown a commitment to improving conditions to transform this corridor into a route that functions for everyone by

- increasing safety for all users;
- improving the quality of walking facilities by repairing poor-quality sidewalks and closing gaps in the sidewalk network so people can walk safely in the corridor;
- incorporating high-quality bike facilities so that people can choose biking as a safe, convenient, and healthy travel mode;
- improving bus reliability and reducing travel time by reducing signal and queue delays and supporting critical first- and last-mile connections;
- improving conditions for transportation equity populations by creating safe, comfortable and accessible bus stops, good-quality sidewalks and bike lanes, and safe crosswalks; and
- supporting economic vitality and livability of the communities along the corridor with multimodal transportation improvements.

1.6 COMMUNITY ENGAGEMENT

Stakeholder participation is a crucial part of any MPO-sponsored study. Hence, MPO staff used several methods to engage stakeholders in planning improvements for corridor studies. The engagement process began with the study location selection process, during which staff considered agency, municipal, subregional, and other public feedback. An advisory committee composed of staff from MassDOT, Massachusetts Bay Transportation Authority, the Town of Braintree, the South Shore Chamber of Commerce, and Braintree

Schools was established to guide the Route 37 corridor study. MPO staff met with the advisory committee to kick off the study. During the kickoff meeting, staff discussed purpose and needs, work scope, tasks and products, and timeline. In a second meeting, MPO staff presented the existing conditions, identified corridor needs and ideas for improvements, and obtained feedback. In addition, MPO staff launched a community survey to help determine the public's opinion about concerns and problems on Route 37 in Braintree and to learn their ideas for resolving them. This report reflects the advisory committee's feedback and the community survey results. Appendix A includes a list of task force members and comments.

Chapter 2—Study Area

2.1 STUDY AREA

The Town of Braintree is a suburban community located 10 miles south of Boston. The town is situated at the crossroads of Interstate 93 and Route 3, which provide access to the Greater Boston area and Cape Cod. The community has access to public transportation serving Boston and Logan International Airport: the Massachusetts Bay Transportation Authority (MBTA) Red Line; the Lakeville, Middleborough, and Greenbush commuter rail lines; and the Logan Express Braintree Airport Shuttle. Braintree is a mature community of 39,143 residents (as of the 2020 Census) with a broad residential and business base positioned for controlled growth in the future.

Figure 1 shows the study area and surrounding communities and streets. The study area is the half-mile buffer on either side of Route 37 that provides land use and demographic context for the corridor for the existing conditions analysis. The study corridor is the extent of the Route 37 travel corridor in Braintree, from the Quincy city line to the Holbrook town line, including crucial cross streets. Route 37 in Braintree is a state highway. It is classified as an urban principal arterial and is part of the National Highway System. The five-mile-long corridor assumes the local road names of Granite Street, Franklin Street, Washington Street, and Hancock Street. Route 37 is a two-lane, two-way roadway that widens into a four-lane, two-way roadway in the Granite Street segment. It is open to all traffic, including trucks, and its right-of-way width varies between 30 to 40 feet wide in the two-lane sections and 60 to 100 feet wide in the four-lane section. This roadway serves regional and local traffic, carrying between 16,000 and 30,000 vehicles daily. The posted speed limits vary from 25 miles per hour (mph) to 40 mph.

Segments of the roadway have different characteristics and contexts that define needs along the corridor. Route 37 provides access to locations with various land uses, including residential, recreational, educational, industrial, office parks, commercial, and open spaces. The corridor was divided into three segments to reflect these characteristics and contexts: Granite Street, Franklin Street, and Washington/Hancock Street segments (Figure 2).

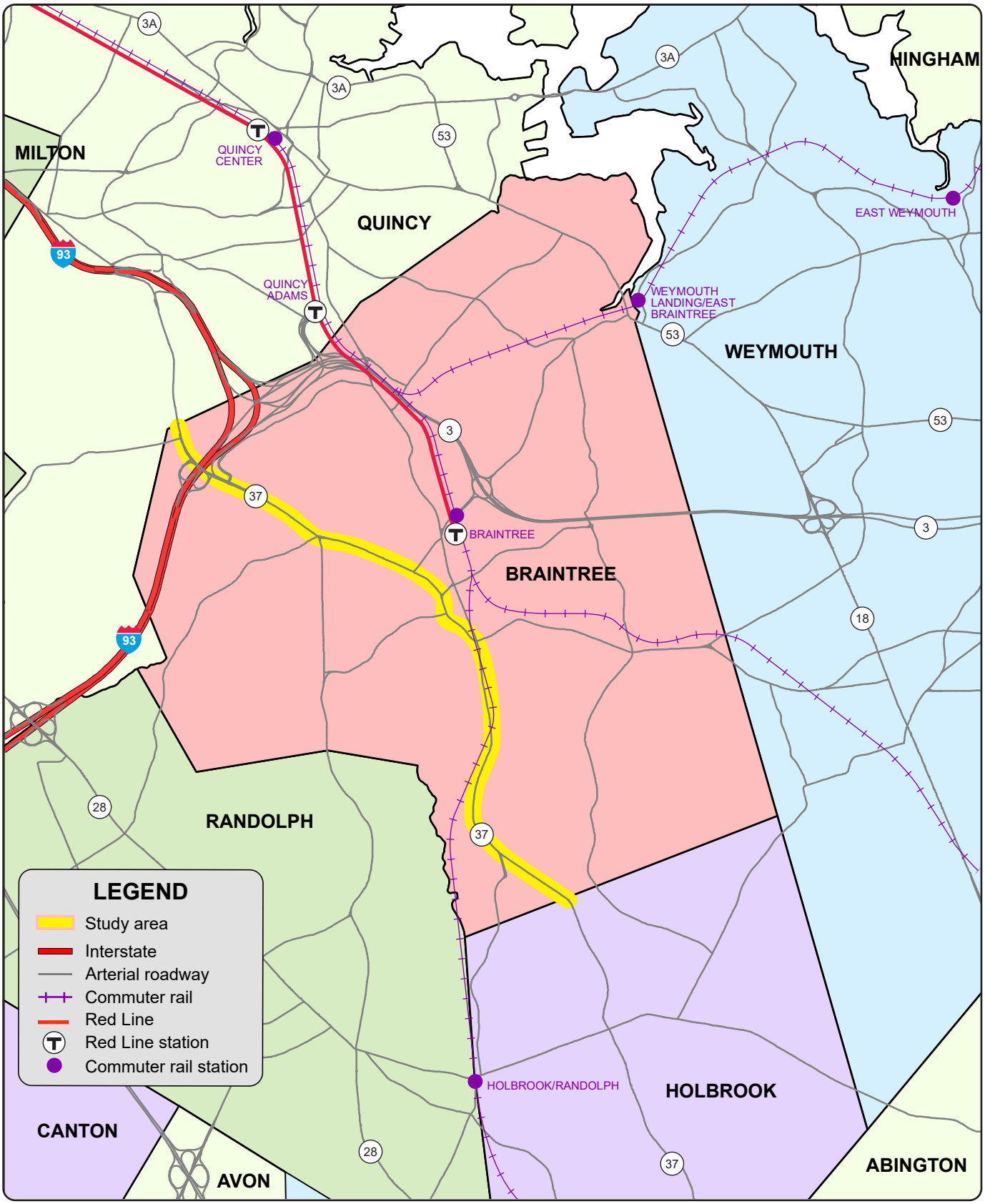

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Figure 1
Regional Map and Study Area

Route 37 Priority Corridor Study
Braintree, Massachusetts

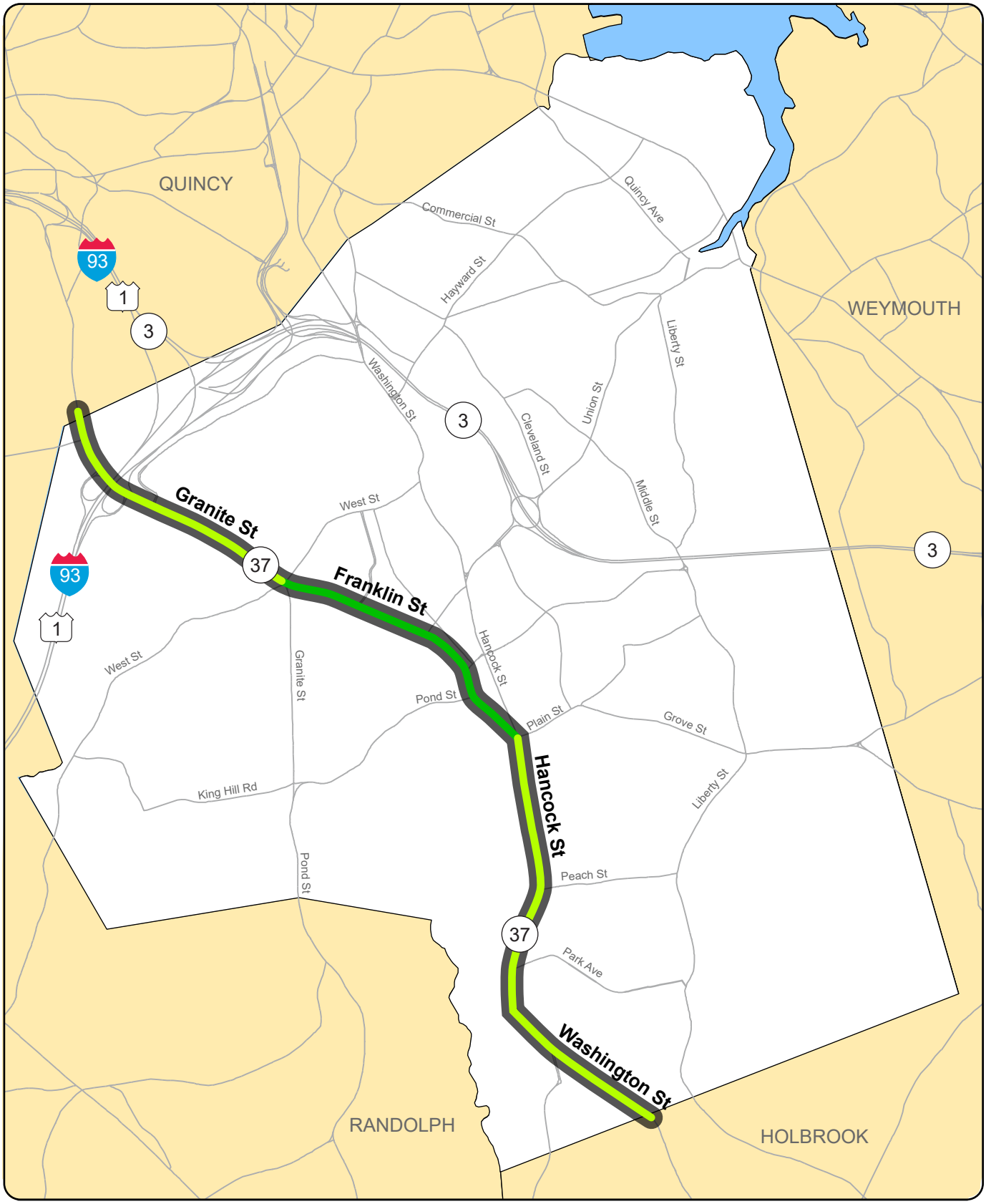

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Figure 2
Segments of Route 37

Route 37 Priority Corridor Study
Braintree, Massachusetts

2.1.1 Granite Street Segment

This segment extends 1.3 miles from the Quincy town line to Five Corners (the intersection of Granite, Franklin, and West streets). It is the northern portion of the corridor. Granite Street is a two-way, four-lane roadway that widens at the signalized intersections to accommodate turn lanes. It is open to all traffic, including trucks, and its right-of-way width varies between 60 and 100 feet. It serves multiple land uses, including office and industrial parks, commercial and retail businesses, residential, and open space. The South Shore Plaza, Braintree Hill Office Park, Wood Road Industrial Park, and the commercial businesses at Five Corners are accessible from Granite Street.

The Granite Street segment carries the highest traffic volumes in the corridor (30,000 vehicles daily). An interchange in the segment provides access to I-93 heading north to Boston and surrounding communities, Route 128 heading south to the MetroWest area, and Route 3 heading east to the Cape and Islands. The seven traffic signals in the segment are located at Wood Road, the I-93 northbound and southbound ramp-arterial junctions, Forbes Road, South Shore Plaza Road, and the south mall entrance near Braintree Kindercare. All seven signalized intersections operate with an adaptive traffic control system, in which traffic signal timing changes or adapts based on actual traffic demand. In addition, the segment contains three unsignalized intersections at Chickatawbut Road, Patridge Hill Road, and Davis Road, as well as several commercial and residential driveways.

There are sidewalks on both sides of Granite Street, but they need to be more continuous and connected. The gaps in the sidewalk network cause people walking to switch sides several times to get to their destinations. All marked crosswalks across Granite Street are located at the signalized intersections and are controlled by pedestrian-activated signals. This segment lacks bike lanes, and people biking must share the road with vehicular traffic; however, there are no signs or pavement markings to alert drivers of the presence of people biking. The segment has space constraints because of the significant differences in grades on either side of the roadway, wetlands close to the roadway, and lack of space under the I-93 bridge over Granite Street. MBTA bus service in this segment includes two bus routes: Route 236 Quincy Center Station-South Shore Plaza and Route 238 Quincy Center Station-Randolph

2.1.2 Franklin Street Segment

This segment extends 1.4 miles from Five Corners to the Plain Street intersection. It is the middle portion of the corridor and operates as a two-way, two-lane street that widens at the signalized intersection to accommodate turn

lanes. Its right-of-way width varies between 30 and 40 feet wide and is open to all traffic, including trucks. The posted speed limits range from 30 mph to 35 mph.

Franklin Street serves multiple land uses, including residential, institutional, commercial and retail businesses, and recreational. Braintree High School, Thayer Academy, Sunset Lake, and the Braintree Municipal Golf Course are in the corridor. Several east-west streets intersect Franklin Street, providing access to other parts of Braintree and beyond.

The segment carries 20,000 vehicles daily and has four signalized intersections at Summer Street, Washington Street, Pond Street, and Plain Street. All four traffic signals operate as isolated signals, and they are not interconnected with each other. Continuous and connected sidewalks are on both sides of Franklin Street, but significant sections need to be in better quality conditions. There are six locations in the segment where people walking can cross Frankin Street: four at the signalized intersections, one at the Leroy Way intersection (unsignalized), and one uncontrolled marked midblock crosswalk near MacMaster Funeral Home. This segment also lacks bike lanes because of space constraints. People biking share the road with vehicles, but there needs to be signs or pavement markings alerting drivers of the presence of people biking. The only bus service in this segment is Route 236.

2.1.3 Hancock/Washington Streets Segment

Route 37 assumes the local names of Hancock Street and Washington Street in the southernmost portion of the corridor. It extends about 2.2 miles from Plain Street to the Holbrook town line. Both streets are two-way, two-lane streets open to all traffic, including trucks. The right-of-way width is about 40 feet wide and includes seven-foot shoulders on both sides of the roadway. Hancock and Washington Streets provide access to multiple land uses, primarily residential. Other uses include commercial, institutional, and recreational. The Braintree Office Park, Highland and Liberty Elementary Schools, South Middle School, Braintree Highland Community Playground, and Cambridge Arts, Technology, and Science Braintree Campus are in the corridor. In addition, the segment serves high volumes of traffic heading to and from Holbrook and beyond.

The Hancock/Washington Streets segment carries traffic volumes similar to the Grant Street segment (25,000 vehicles daily). It has three signalized intersections, several unsignalized intersections, and commercial and residential driveways. The three traffic signals are located at Braxton Street, South Street, and Roosevelt Street and operate as isolated traffic signals. Although the segment has several unsignalized intersections, the primary two are Peach Street and Park Avenue intersections. There are continuous and connected

sidewalks on both sides of the roadway, except the western side of Washington Street between Braxton Street and Peach Street. However, a substantial portion of the sidewalks in the northern section from Plain Street to Braxton Street are in poor quality conditions. Bike lanes are present only from the Holbrook town line to Arbutus Avenue, and people biking beyond this section either ride on the sidewalks or the shoulders. The MBTA bus Route 230 runs the entire segment. Route 230 begins at Quincy Center station and operates via Braintree Station busway, Hancock Street, Washington Street, to Montello Station in Brockton.

Chapter 3—Existing Conditions Assessments

3.1 DATA COLLECTION

Before conducting the existing conditions assessments, a comprehensive data collection plan was prepared, including gathering data from existing databases maintained by the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), the Town of Braintree, and the Metropolitan Planning Organization (MPO) for analyses. The data comprise land use information, transportation equity populations, relevant transportation assets such as signals equipment and timing information, sidewalks, and bike lanes. Additional information includes roadway inventory data and studies and projects in the corridor.

MassDOT collected data on roadway users, including volumes and mix of vehicular traffic, people walking or biking, and speeds of vehicles. Data on transit services (bus, rapid transit, and commuter rail) were from the MBTA, including ridership, operating service, and facilities. MPO staff gathered safety data on historical crashes, sites with excess expected average crash frequency, and sites with systemic risk factors such as pedestrian and bicycle-related, younger and older drivers, and impaired and distracted drivers. In addition, MPO staff developed a survey to help determine the public's opinion about concerns and problems on Route 37 in Braintree and how to resolve them.

3.2 TRANSPORTATION EQUITY POPULATIONS

The corridor includes several MPO-defined transportation equity zones where residents include low-income and minority populations, younger and older populations, and people with limited English proficiency (Figure 3). These communities are expected to benefit from safety and multimodal improvements, which can help improve quality of life by reducing crashes, increasing physical activity through walking or biking, and improving access to jobs, education centers, and health services

3.3 LAND USE

The map in Figure 4 shows the land uses in Braintree. Multiple land uses surround the Route 37 corridor, and land use intensity varies throughout the corridor. Braintree land use patterns are well established, so new uses are expected to be redeveloped or repurposed from existing parcels and properties.

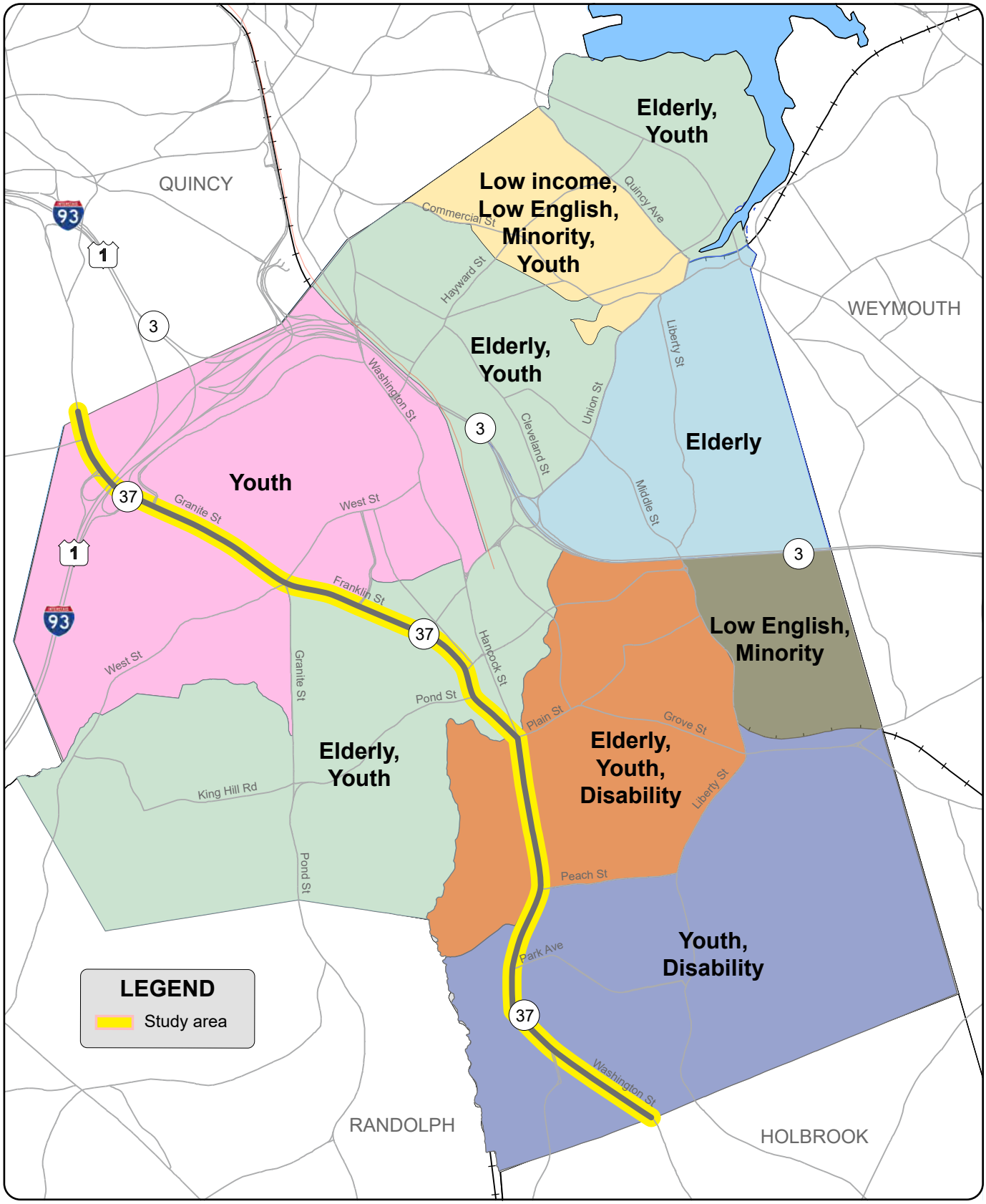

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Figure 3
Transportation Equity Populations

Route 37 Priority Corridor Study
Braintree, Massachusetts

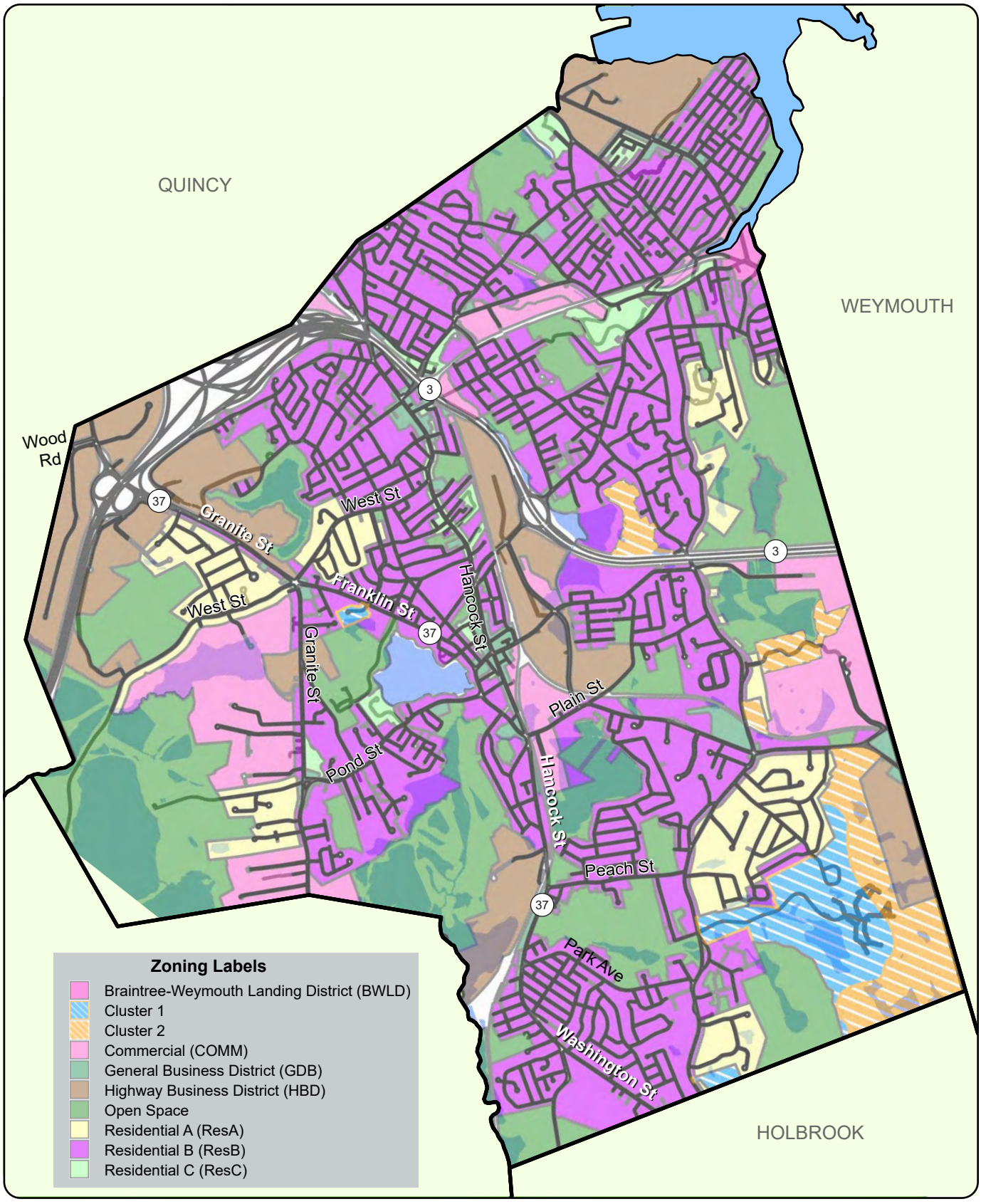

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Figure 4
Zoning and Land Use Map

Route 37 Priority Corridor Study
Braintree, Massachusetts

The area surrounding the Granite Street segment is zoned a Highway Business District, with large offices and industrial parks located along Wood Road, Rockdale Street, and Forbes Road. Businesses in the office and industrial parks comprise professional, life science and technology, hospitality, entertainment, commercial, and retail services. Also in the segment is the South Shore Plaza, a large shopping mall with multiple retail stores and restaurants.

At the northern end of the Franklin Street segment is the Five Corners, a major commercial center. Businesses at Five Corners include commercial retail services, offices for professional services, banks, and restaurants. Although the area surrounding Franklin Street Segment is zoned residential with single- and multi-family residences, it is mixed with educational, commercial, and recreational uses.

South of the corridor, the Hancock/Washington Streets segment is surrounded by multiple land uses, including residential (dominant uses), educational, open spaces, small-scale commercial retail, and industrial parks.

3.4 MULTIMODAL TRANSPORTATION

The Route 37 corridor supports several land uses with the potential to generate and attract walking, biking, driving, and transit trips. Automobiles are the primary access to all the land uses along the corridor. Biking, walking, and bus service accommodations are in the corridor, but they need improvements due to poor quality conditions, gaps and connectivity issues, and limited availability.

3.4.1 Walking and Biking Modes

Figure 5 shows the locations where there are sidewalks and crosswalks. Sidewalks are present on Route 37 for about 90 percent of its length. However, there are gaps in the sidewalk network on Granite Street, which causes people to use crosswalks to switch sides several times to get to their destinations. In addition, all three roadway segments have poor-quality sidewalk conditions, which create challenges for people walking or using assistive mobility devices. Figure 6 shows walking volumes at the study intersections.

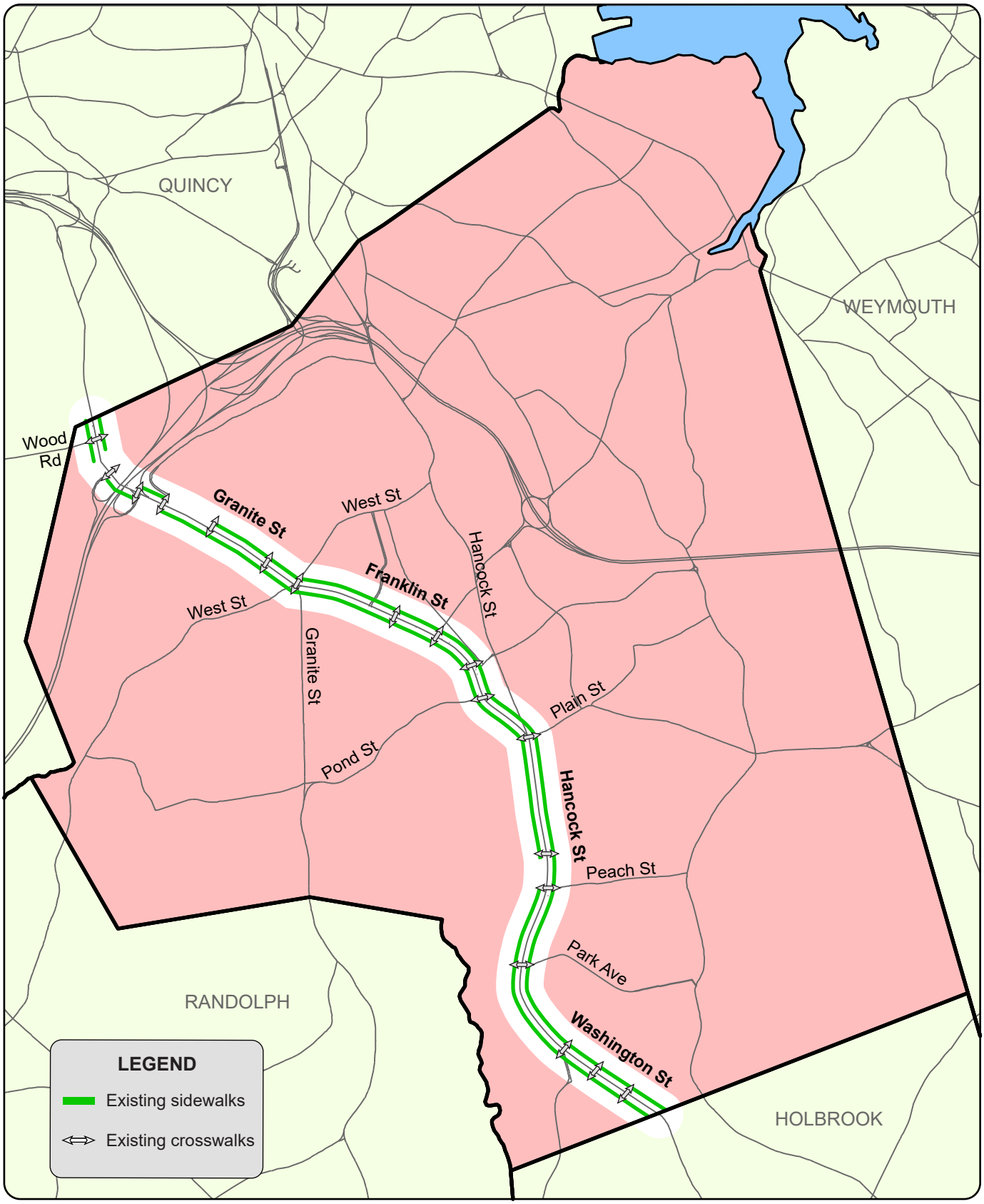

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Figure 5
Existing Sidewalks and Crosswalks

Route 37 Priority Corridor Study
Braintree, Massachusetts

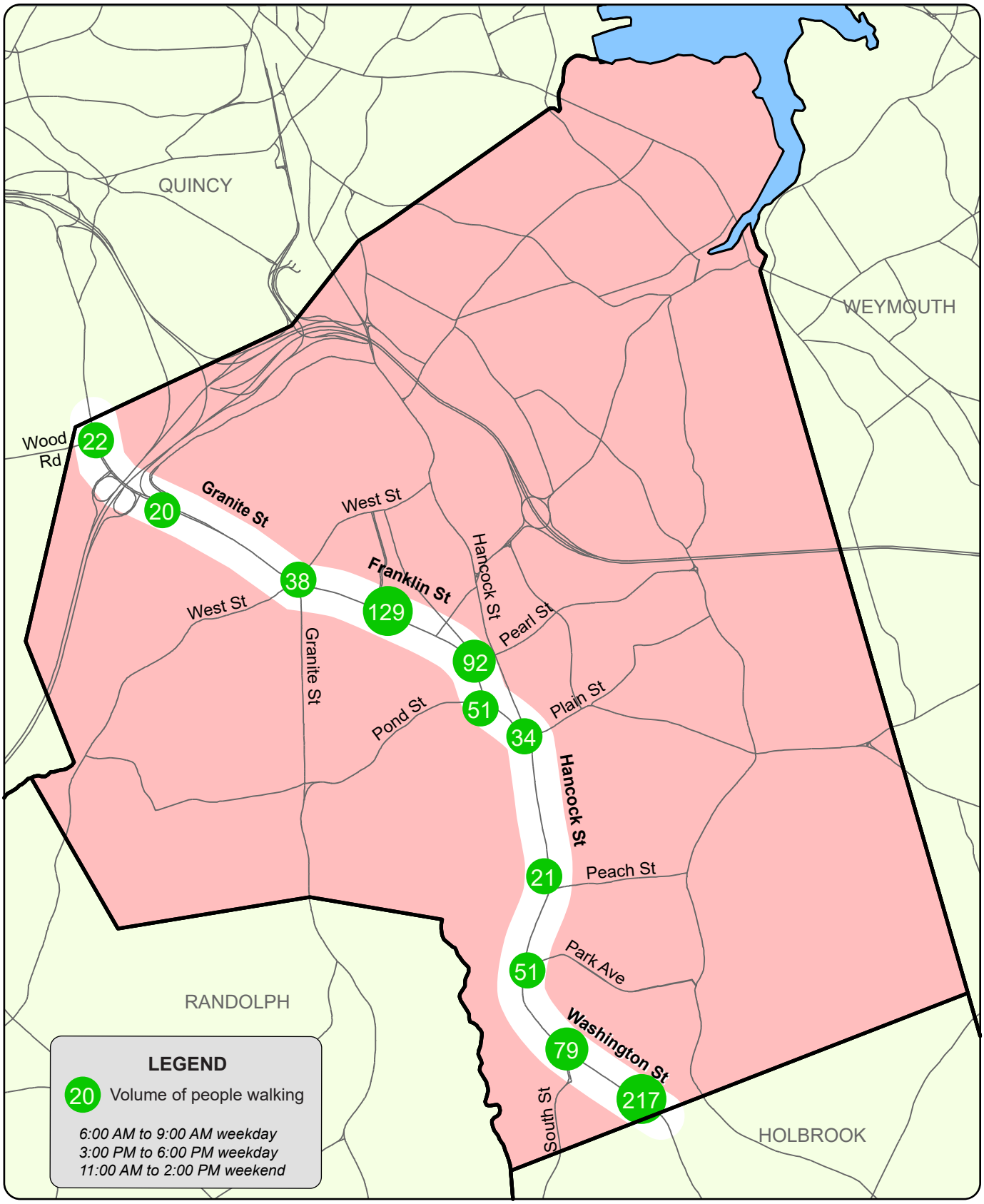

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Figure 6
Volume of People Walking

Route 37 Priority Corridor Study
Braintree, Massachusetts

People walking on Route 37 can safely cross it at the signalized intersections, where crosswalks have pedestrian-activated signals and curb ramps. In addition to signalized intersections, people walking can also cross Route 37 at six marked midblock crosswalks across Route 37: one near Park Avenue controlled by a pedestrian signal, one near the Braintree Highland Community Playground controlled by a Rectangular Rapid Flashing Beacon (RRFB), and four near Leroy Way, McMaster Funeral Home near Taylor Street, Peach Street, and Arbutus Avenue that are uncontrolled. Because of the high volumes and speeds of vehicles, some uncontrolled marked crosswalks would need upgrades such as RRFB to improve safety. Together, the spacing between the crosswalks is about as far apart as 0.25 miles (1300 feet) and does not create a barrier between businesses and neighborhoods east and west of Route 37. Table 1 shows the number of people biking. The low number may be attributed to a need for safer biking infrastructure and high vehicle speeds and volumes, which create a high-stress environment and safety concerns for people biking.

Table 1
Number of People Biking

Location	Volume
Granite Street at Wood Road/Rockdale Street	5
Granite Street at I-93 southbound ramp junction	2
Granite Street at Forbes Road	1
Granite Street at KinderCare/South Mall Entrance	6
Granite Street at Franklin Street and West Street (Five Corners)	10
Franklin Street at Leroy Way	19
Franklin Street at Washington Street	11
Washington Street at Pond Street	11
Washington Street at Hancock Street/Plain Street	5
Washington Street at Braxton Street	4
Washington Street at Park Avenue/Standish Avenue	4
Washington Street at South Street	1
Washington Street at Roosevelt Street	25

Walking and Biking Levels of Service (LOS)

The roadway infrastructure primarily affects the quality of walking and biking travel, such as whether there are sidewalks, crosswalks, curb ramps, or bike lanes. The quality of walking and biking travel is also affected by the character of the roadway and factors that contribute to the safety and security of people, such as the speed and volume of vehicles and comfort and convenience. MPO staff developed LOS tools that grade a given roadway on its quality of walking and biking travel and whether it reflects these objectives: safety, system preservation,

capacity management and mobility, and economic vitality.[3] Based on this evaluation, the quality of walking on Route 37 was rated *poor* or *fair* regarding safety, system preservation, capacity management and mobility, and economic vitality. Bicycle LOS was rated unacceptable regarding safety, system preservation, capacity management and mobility, and economic vitality. The assessment indicates that the roadway needs improvements to safely accommodate people walking and biking. The ratings from this assessment tool are in Appendix B.

Challenges for People Walking and Biking

People walking and biking in the corridor face several challenges. Following the analysis of crash data, field survey, review of signal data and layouts, and recommendations from road safety audits, these challenges were identified, some of which are summarized below.

Walking Challenges

- Pedestrian-involved crashes: Five crashes involving people walking along Route 37.
- Gaps in sidewalks: Gaps in the sidewalk network on Granite Street and Hancock-Washington Street segments.
- Poor sidewalk conditions: Uneven sidewalk surfaces, broken with cracks, overgrown vegetation, and obstacles such as utility poles that reduce width to less than four feet. All three segments exhibit these deficiencies.
- Lack of leading pedestrian intervals at signalized intersections with concurrent pedestrian phases (Wood Road intersection).
- Noncompliant Americans with Disabilities Act (ADA) curb ramps: At the I-93 ramp-arterial junctions and intersections of the mall entrances.
- Inadequate street lighting: Poor lighting on Route 37 poses safety and security concerns for people walking.

Biking Challenges

- Lack of bicycle infrastructure for people biking.
- High-stress environment for people biking due to high vehicle speeds and volumes.

[3] Ryan Hicks and Casey-Marie Claude, *Pedestrian Level-of-Service Memorandum*, Technical Memorandum to the Boston Region Metropolitan Planning Organization, January 19, 2017; Casey-Marie Claude, *Development of a Scoring System for Bicycle Travel in the Boston Region,* Technical Memorandum to the Boston Region Metropolitan Planning Organization, November 8, 2018.

- Issues with bikeable shoulders: Although bikeable shoulders are present on the Hancock/Washington Streets segment, they are not marked as bike lanes.
- Lack of connectivity for bike trips between Route 37 and crossing arterials.

3.4.2 Transit Mode

Figure 7 shows the MBTA service in or near the study area, including the Red Line station and commuter rail station at Braintree Station and three bus routes:

- 230 Quincy Center Station-Montello Station
- 236 Quincy Center Station-South Shore Plaza
- 238 Quincy Center Station-Randolph

Rail Service

Red Line

Braintree station is the southern terminal for one of two Red Line branches and is also a stop on the Middleborough and Kingston commuter rail lines. The station includes a parking garage under construction and contains 1,300 spaces as built and 350 open spaces with additional temporary spaces available at two surface lots on Ivory Street. As of July 2023, Red Line service from Braintree operates every 18 minutes on weekdays and every 22 minutes on weekends. Ridership at Braintree Station on a sample day of September 2022 was 2,630 total boardings, with 1,529 boarding between 6:00 AM and 9:00 AM. On a sample day of April 2023, all-day boardings from Braintree were 1,497, with 651 boarding between 6:00 AM and 9:00 AM due to speed restrictions and a reduction in peak period scheduled service.

Commuter Rail

The commuter rail service at Braintree station presently consists of 27 inbound and 25 outbound trips to/from Boston on weekdays, 15 of which are from Middleborough and 12 from Kingston. There are 18 inbound and 17 outbound trips on weekends. As mitigation for the Red Line service issues, fare policy changes have significantly increased commuter rail ridership from Braintree Station to Boston. Draft manual counts undertaken by Central Transportation Planning Staff at Braintree station from 6:00 AM to 9:00 AM in July 2023 show more than 600 passengers boarding commuter rail trains to Boston.

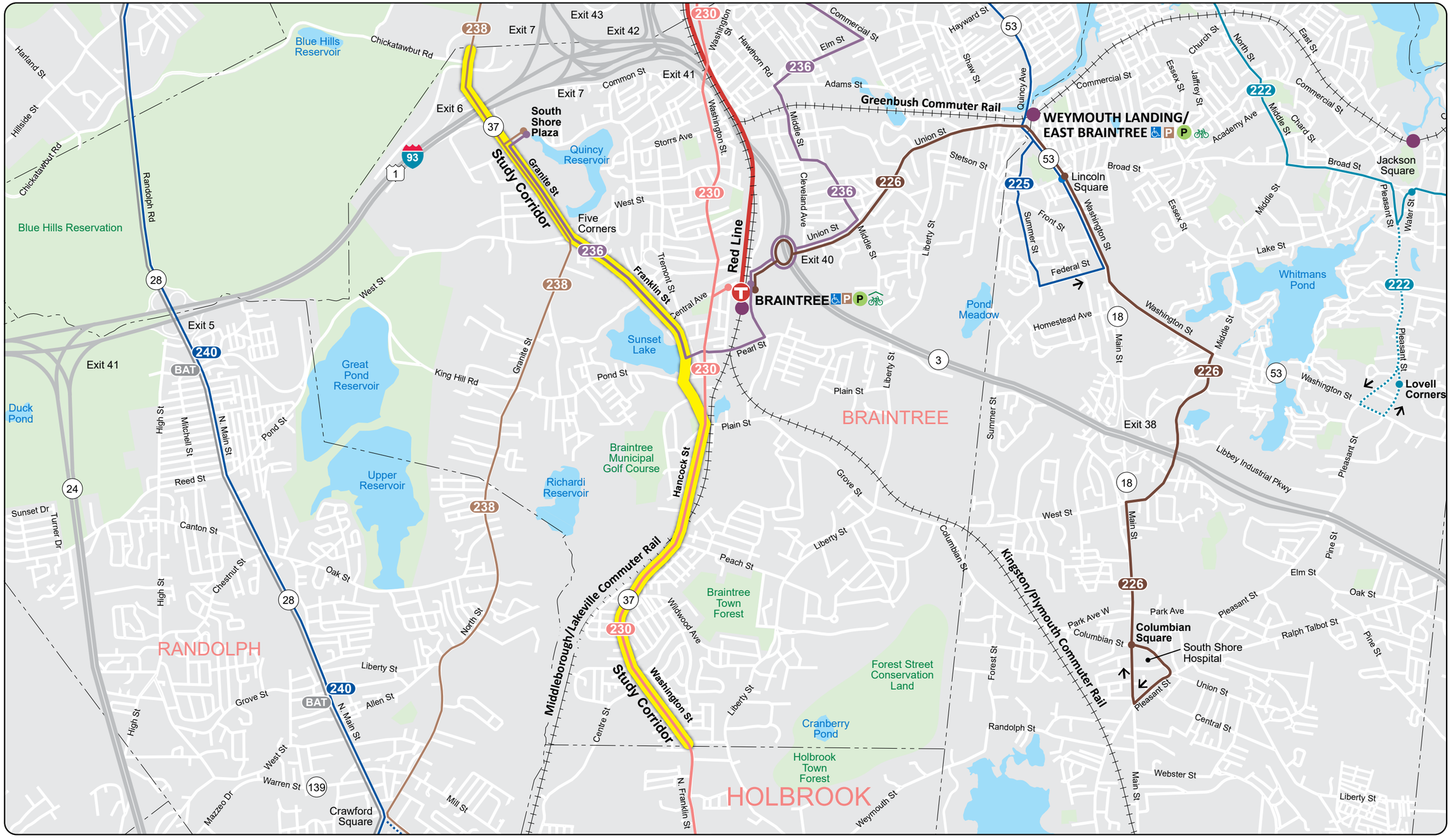

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Figure 7
Transit Services Around Route 37, Braintree

Route 37 Priority Corridor Study, Braintree, Massachusetts

Bus Service

Route 230

Route 230 begins at Quincy Center station and operates via Braintree Station busway, Hancock Street, and Washington Street to Montello Station in Brockton. Service operates every 25–30 minutes in the peak, every 60 minutes midday on weekdays and Saturdays, every 75 minutes in the evenings, and every 90 minutes on Sundays. Fall 2022 MBTA total Route 230 ridership data collected from automatic passenger counters was 788 riders on weekdays, 435 on Saturdays, and 260 on Sundays. Fall 2019 average weekday ridership was 1,359. The route has retained 57 percent of 2019 weekday ridership and rising.

Route 236

Route 236 begins at Quincy Center station and operates via Hancock Street, Washington Street, and Granite Street into South Shore Plaza. Morning rush-hour service only operates between Quincy Center and Braintree station, and the route operates to South Shore Plaza at all other times. Service operates every 60 minutes on midday, PM peak, evenings, Saturdays, and Sundays. Fall 2022 MBTA total Route 236 ridership data collected from automatic passenger counters was 376 on weekdays, 375 on Saturdays, and 243 on Sundays. In Fall 2019, the average weekday ridership was 491. The route has maintained 76 percent of 2019 weekday ridership.

Route 238

Route 238 begins at Quincy Center station and operates via Hancock Street, Washington Street, Franklin Street, Granite Street, and South Shore Plaza to Crawford Square or Randolph/Holbrook Commuter Rail Station. Service operates every 25 minutes in the AM peak, 65 minutes middays, 40 minutes in the PM peak, 60 minutes on Saturdays, and every 80 minutes on evenings and Sundays.

Fall 2022 MBTA total Route 238 ridership data collected from automatic passenger counters was 965 on weekdays, 648 on Saturdays, and 361 on Sundays. Fall 2019 weekday ridership was 1,438. The route has maintained 67 percent of 2019 weekday ridership and is rising.

Challenges for People Taking Transit

People taking bus transit in the corridor face similar challenges for walking and biking. Specific challenges for bus riders are

- on-time performance due to traffic congestion;
- lack of dedicated bus turnouts with accessible features such as curb ramps and crosswalks could present safety problems for riders;

- lack of bus shelters: Only two bus stops in the corridor have bus shelters—at South Shore Plaza and Roosevelt Street. Inclement weather could impact people's decisions to take the bus; and
- lack of bus priority signals to reduce delays and critically congested segments of the corridor.

3.4.3 Driving Mode

Traffic Volumes and Speed

MassDOT Highway Division's Traffic Data Collection collected traffic data for the study. Automatic traffic recorder (ATR) counts were collected from Monday, May 1, 2023, to Friday, May 5, 2023. The ATR counts included daily traffic volumes, speeds, and traffic mix (light and heavy vehicles). MassDOT also collected turning-movement counts (TMC) in the study area on Thursday, May 4, 2023, and Saturday, May 6, 2023. The TMC counts were performed during the weekday AM peak travel period (6:00 AM to 9:00 AM) and weekday PM peak travel period (3:00 PM to 6:00 PM), and during the weekend (11:00 AM to 2:00 PM). In all cases, heavy vehicles, pedestrians, and bicycles were recorded separately. Figures 8 and 9 show the average weekday traffic volumes and the turning-movement volumes at 16 intersections during weekday AM and PM peak hours and the Saturday PM peak hour. Figure 10 shows the measured speeds and posted speed regulations for the corridor. The average speeds are consistent with the posted speed regulations, but the 85th percentile speeds are higher than those of the posted speed regulations in all three segments of the corridor. Speeding is a major concern, especially in the Franklin Street and Hancock/Washington Street segments where residential neighborhoods and schools surround these segments. Many respondents to the community survey commented on this issue. The traffic and speed data are included in Appendix C.

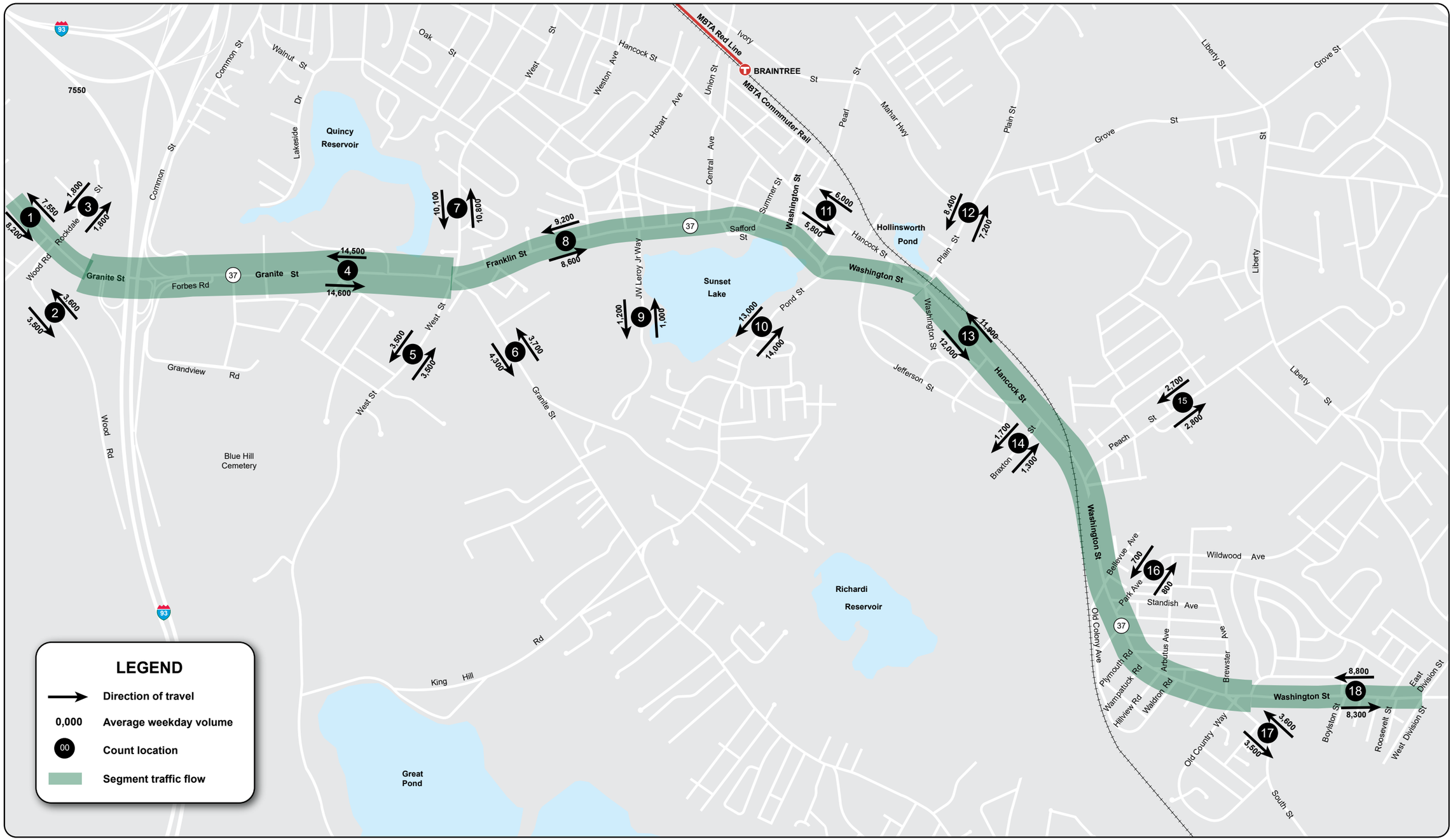

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Figure 8
Average Weekday Traffic Volumes

Route 37 Priority Corridor Study, Braintree, Massachusetts

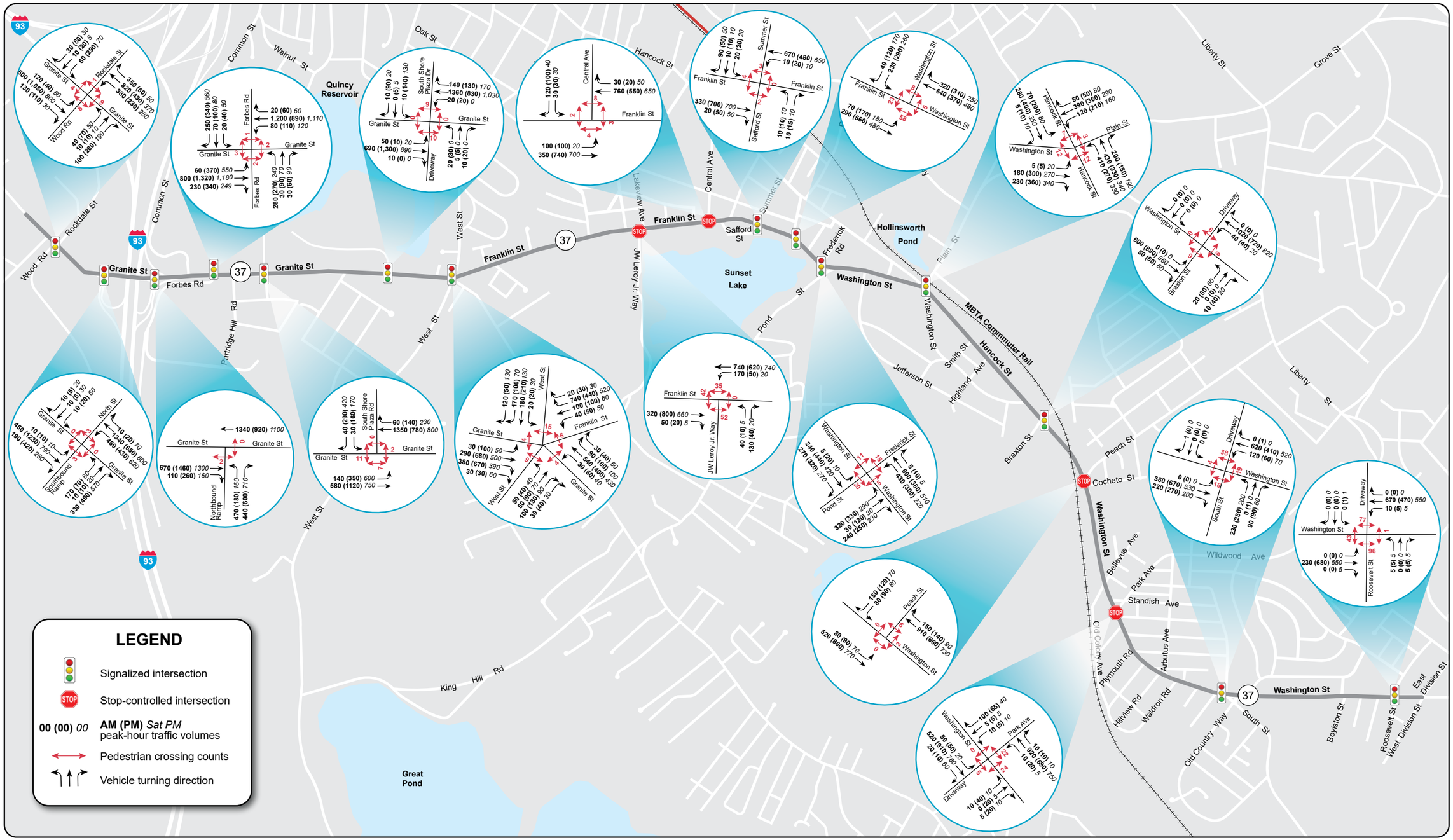

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Figure 9
2023 Existing Conditions
Peak-Hour Turning Movement Volumes

Route 37 Priority Corridor Study, Braintree, Massachusetts

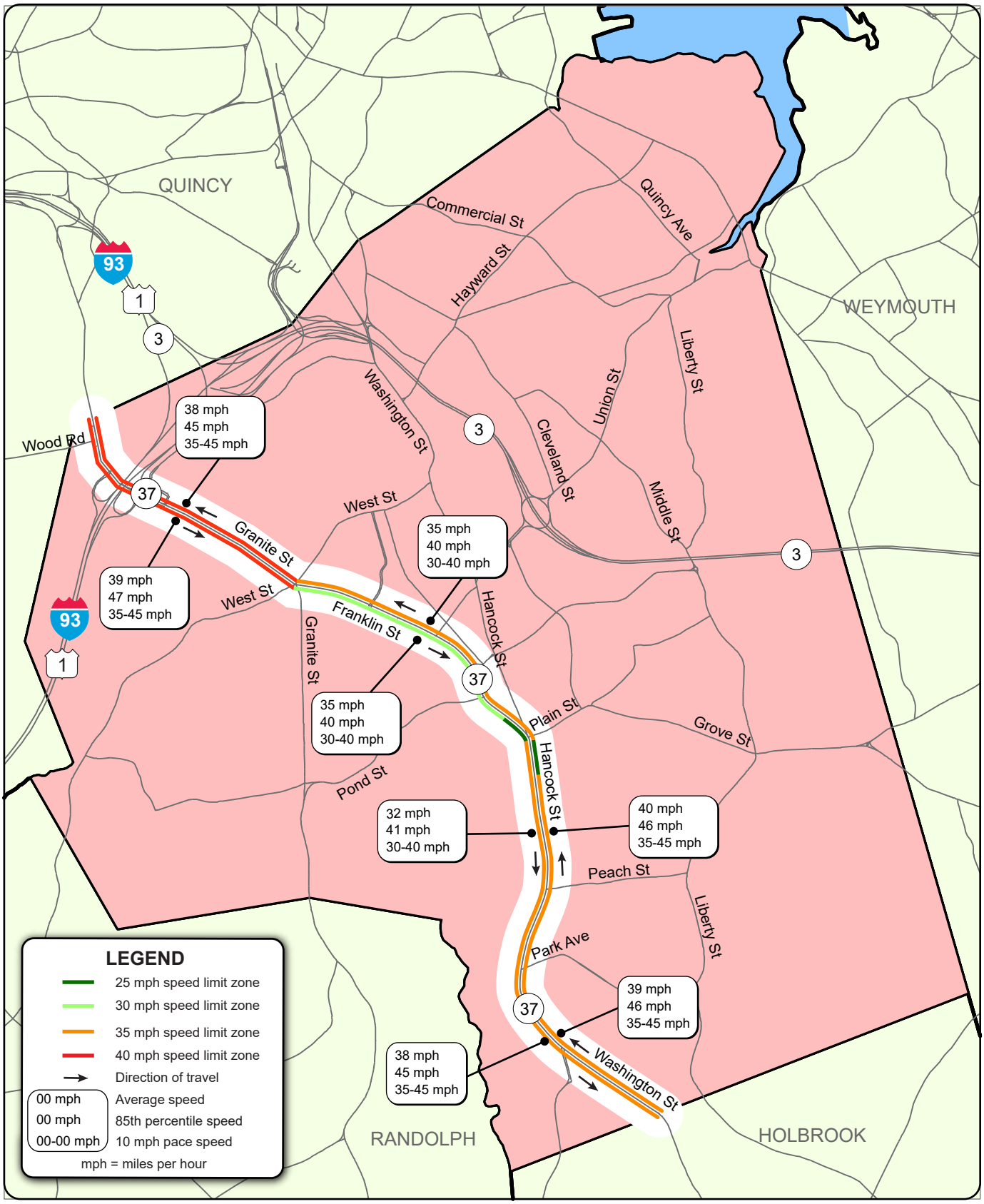

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Figure 10
Existing Conditions
Measured Speeds and Speed Regulations

Route 37 Priority Corridor Study
Braintree, Massachusetts

Intersection Levels of Service

MPO staff conducted traffic-operations analyses consistent with the Highway Capacity Manual's methodologies.[4] These methodologies are used to assess traffic conditions at signalized and unsignalized intersections and to rate the LOS from A to F. LOS A represents the best operating conditions (little to no delay). In contrast, LOS F represents the worst operating conditions (long delay). LOS E represents operating conditions at capacity (the limit of acceptable delay). Table 2 presents the control delays associated with each LOS for signalized and unsignalized intersections. Figures 11 through 12 show the analysis results for the weekday AM, weekday PM, and Saturday PM peak periods, respectively. The intersection LOS analyses are included in Appendix D. The following intersections were found to operate under congested conditions and have long queues during peak travel hours.

- Granite Street at Wood Road/Rockdale Street
- Granite Street at Forbes Street
- Granite Street at Franklin Street and West Street (Five Corners)
- Washington Street at Franklin Street
- Washington Street at Plain Street and Hancock Street
- Washington Street at Peach Street

Table 2
Intersection Level of Service Criteria

Level of Service	Signalized Intersection Control Delay (seconds per vehicle)	Unsignalized Intersection Control Delay (seconds per vehicle)
A	<10	<10
B	10–20	10–15
C	20–35	15–25
D	35–55	25–35
E	55–80	35–50
F	>80	>50

Source: Highway Capacity Manual 2010.

[4] Transportation Research Board of the National Academies, *Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis,* Washington, DC, September 2020; CUBIC, Trafficware Inc., Synchro plus SimTraffic, Version 11.1 Build 1 version 6 (11.1.1.6), Sugar Land, Texas.

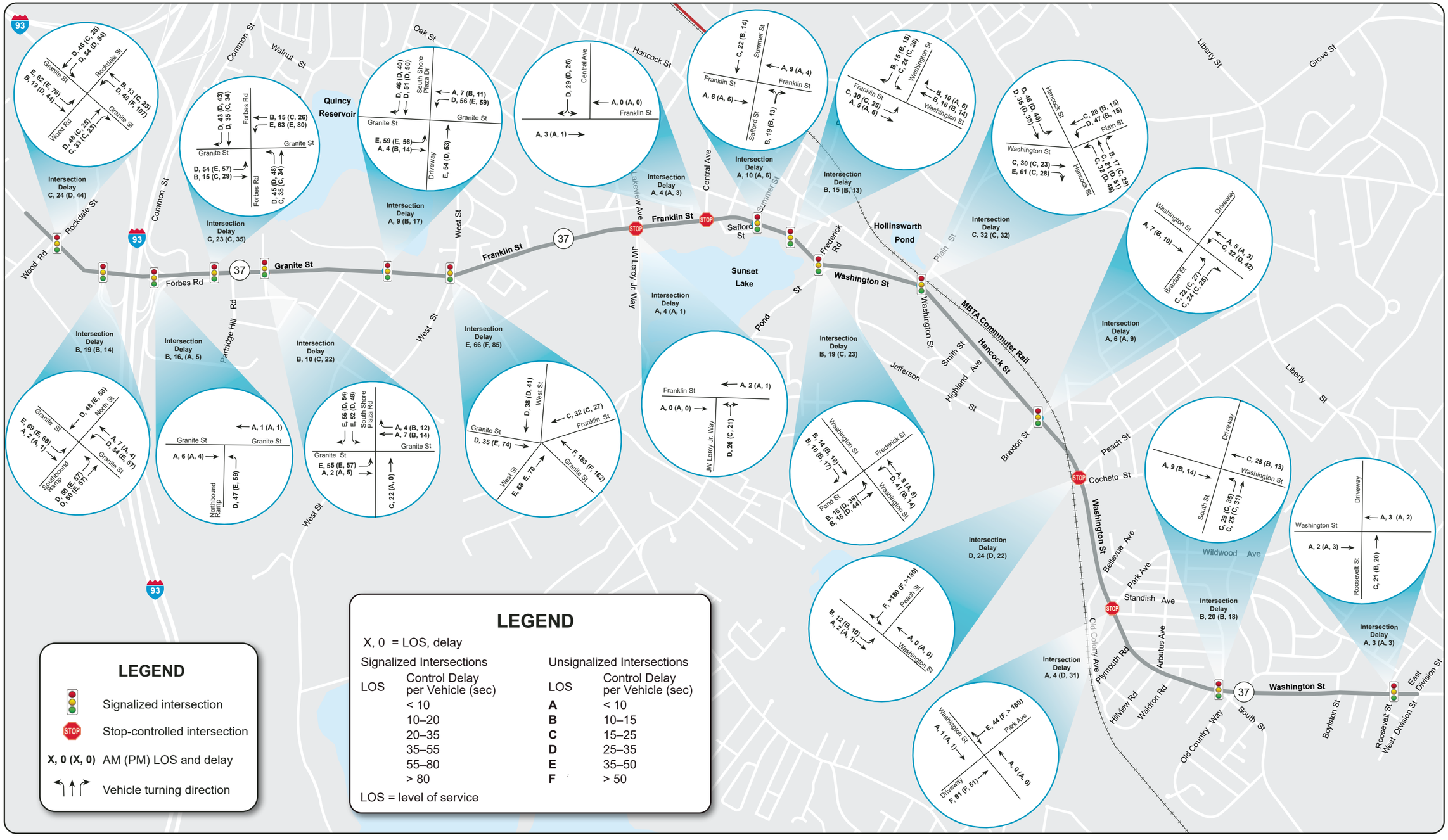

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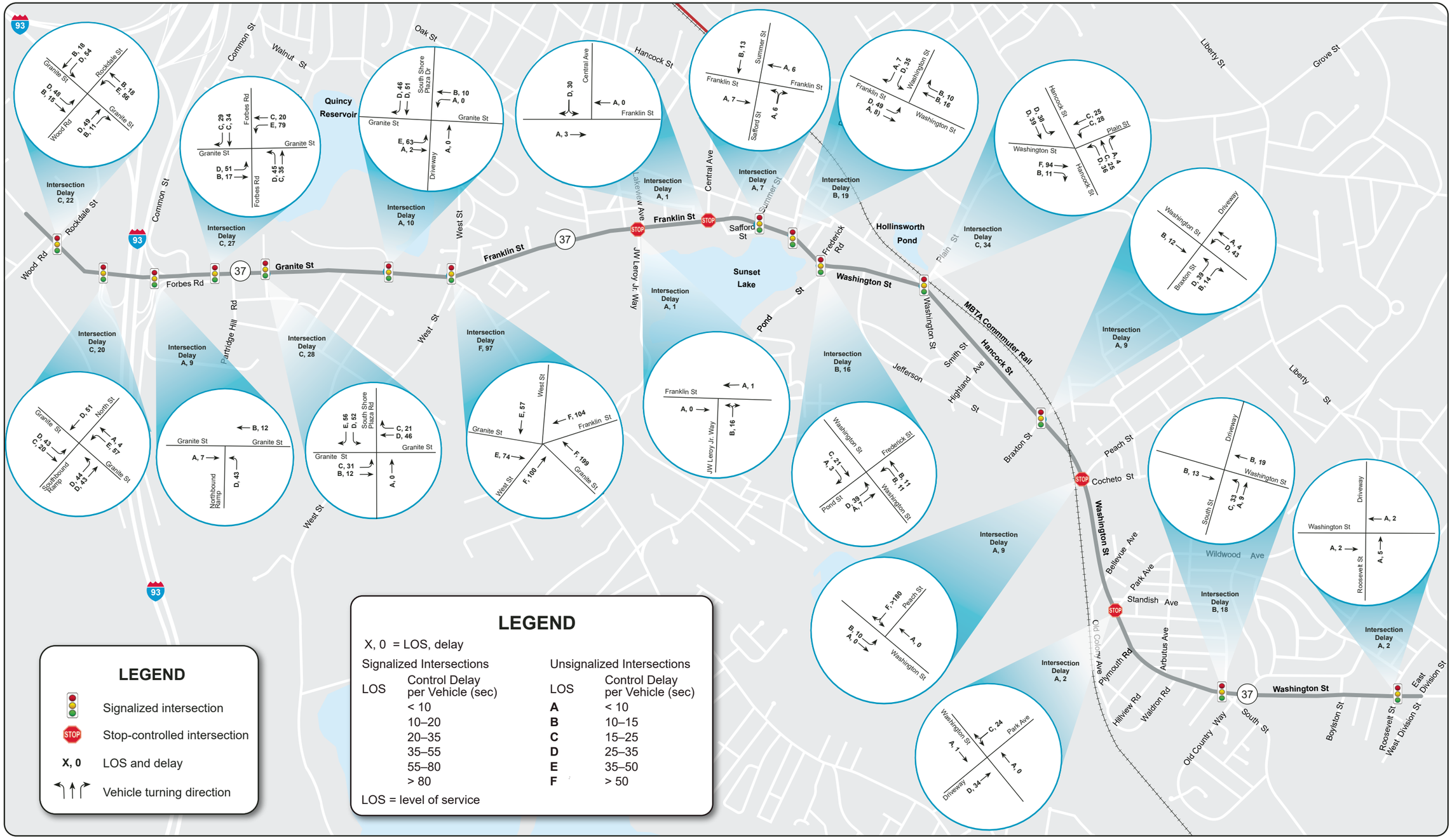
Figure 11
2023 Existing Conditions
Weekday Peak-Hour LOS and Delays

Route 37 Priority Corridor Study, Braintree, Massachusetts



LEGEND

- Signalized intersection
- Stop-controlled intersection
- X, 0 — LOS and delay
- Vehicle turning direction

LEGEND

X, 0 = LOS, delay

Signalized Intersections

LOS	Control Delay per Vehicle (sec)
	< 10
	10–20
	20–35
	35–55
	55–80
	> 80

Unsignalized Intersections

LOS	Control Delay per Vehicle (sec)
A	< 10
B	10–15
C	15–25
D	25–35
E	35–50
F	> 50

LOS = level of service

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Figure 12
2023 Existing Conditions
Weekend Saturday Peak-Hour LOS and Delays

Route 37 Priority Corridor Study, Braintree, Massachusetts

3.5 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic control signals are valuable devices for controlling vehicular and pedestrian and bicycle traffic. They assign the right-of-way to various traffic movements and thereby strongly influence traffic flow. Traffic control signals that are properly designed, located, operated, and maintained will provide orderly movement of traffic, and reduce congestion and the frequency and severity of certain types of crashes, especially right-angle collisions. Justifying the need for a traffic control signal at an unsignalized intersection involves analyzing factors related to the existing traffic operations and safety conditions at the intersection, as well as the potential to improve these conditions. The *Manual on Uniform Traffic and Control Devices* (MUTCD) lists nine traffic signal warrants that justify installing a traffic signal. The warrants are listed in Table 3. Using the methodology outlined in the MUTCD, staff performed detailed traffic signal warrant analyses to determine whether the installation of a traffic control signal at two intersections are justified and if signalizing the intersections would improve safety and traffic operations.

- Franklin Street and Leroy Way intersection. Leroy Way provides access to Braintree High School and during school opening and closing periods, a police detail controls traffic at the intersection to allow students to cross Franklin Street and school traffic on Leroy Way to enter Franklin Street safely.
- Washington Street and Peach Street intersection. This intersection is located on a horizontal and vertical curve that limits sight distances on the approach of Peach Street. During peak travel periods when volumes on Washington Street are high, it is difficult to turn out of Peach Street.

Table 3 presents the results of the traffic signal warrant analyses for these intersections. Detailed traffic signal warrant analysis worksheets are included in Appendix D. Existing conditions at the intersection of Franklin Street and Leroy Way satisfied two of the nine warrants. The intersection has a low crash rate, and traffic delays on Leroy Way occur only during the school opening and closing periods. Existing conditions at the intersection of Washington Street and Peach Street satisfy three of the nine warrants. The intersection had 24 crashes from 2016 and 2020 and Peach Street experienced delays and queuing during weekdays AM and PM peak travel periods. Based on the results of the signal warrant and intersection capacity analyses, MPO staff recommend that MassDOT consider installing a traffic signal at the intersection of Washington Street and Peach Street. MPO staff do not recommend installing a traffic signal at the intersection of Franklin Street and Leroy Way; however, an upgraded high-visibility crosswalk, such as a RRFB, is recommended for the intersection.

Table 3
Results of the Traffic Signal Warrant Analysis

Warrant	Franklin Street at Leroy Way	Washington Street and Peach Street
Warrant 1, Eight-Hour Vehicular Volume	Not satisfied	Satisfied
Warrant 2, Four-Hour Vehicular Volume	Satisfied	Satisfied
Warrant 3, Peak Hour	Satisfied	Satisfied
Warrant 4, Pedestrian Volume	Not satisfied	Not satisfied
Warrant 5, School Crossing	Not satisfied	Not satisfied
Warrant 6, Coordinated Signal System	Not satisfied	Not satisfied
Warrant 7, Crash Experience	Not satisfied	Not satisfied
Warrant 8, Roadway Network	Not satisfied	Not satisfied
Warrant 9, Intersection Near a Grade Crossing	Not satisfied	Not satisfied

Source: Central Transportation Planning Staff.

3.6 CRASHES

Crash data for Route 37 from January 2016 through December 2020 was used to assess safety in the corridor. Analyses include a summary of crash statistics, including severity, collision type, weather and ambient light conditions, and mode of travel. Analysis results are summarized in Table 4 for the high-crash intersections and intersections with fatal crashes.

Table 4
Summary of Intersection Crashes

Crash Variable	Wood Road	North Street	Forbes Road	Five Corners	Plain Street	Peach Street	South Street
Total number of crashes	28	22	92	97	37	24	6
Severity	--	--	--	--	--	--	--
Property damage only	11	13	56	65	22	15	2
Nonfatal injury	14	9	35	32	14	8	3
Fatality	0	0	0	0	0	1	1
Not reported/unknown	3	0	2	1	1	0	0
Crash Type	--	--	--	--	--	--	--
Single vehicle	5	1	11	8	3	3	1
Rear-end	8	9	24	19	19	12	1
Angle	11	11	45	61	11	9	4
Head-on	0	0	4	4	1	0	0
Sideswipe, same direction	3	1	7	4	2	0	0
Sideswipe, opposite direction	1	0	2	2	1	0	0
Not reported/unknown	0	0	0	0	0	0	0

Ambient Light Conditions	--	--	--	--	--	--	--
Daylight	23	18	55	74	26	17	5
Dark—lighted roadway	3	4	34	19	11	6	1
Dark—unlit roadway	0	0	0	1	0	0	0
Dark—unknown	0	0	0	0	0	0	0
Dawn	1	0	3	3	0	1	0
Dusk	1	0	1	0	0	0	0
Unknown/other	0	0	0	1	0	0	0
Involved pedestrian(s)	1	0	0	1	0	1	0
Involved bicyclist(s)	2	0	0	0	0	0	0
Occurred during peak periods*	17	9	33	55	18	17	0
Wet or icy pavement conditions	1	9	18	23	10	11	0
Dark conditions (lit or unlit)	5	4	38	26	11	7	1

*Peak periods are 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM, Monday through Friday.
Source: Central Transportation Planning Staff.

- There were two fatal crashes: one pedestrian-related crash on the western side of Washington Street where there is no sidewalk just north of Peach Street intersection and one crash at the intersection of Washington Street and South Street.
- Injury crashes at the intersections ranged from 33 to 50 percent.
- Rear-end and angle crashes were the common crash types; they represent between 70 to 90 percent of the crashes.
- The majority of the crashes occurred during daylight conditions. However, nighttime (lit or unlit) crashes ranged between 11 and 30 percent.
- Weekday peak period crashes represented between 36 to 61 percent of the crashes

3.6.1 Collision Diagrams

MPO staff prepared collision diagrams for the Highway Safety Improvement Program (HSIP) crash clusters and high-crash locations to examine patterns and factors contributing to the crashes listed below. The diagrams are included in Appendix E.

- High frequency of angle crashes within the intersections. The likely causes are poor signal visibility, distracted and impaired driving, excessive speeds on the approaches, inadequate signal timing, and congestion.
- High frequency of rear-end crashes on Granite Street approaches. Probable causes are driver distraction, inattention, impaired driving,

vehicles following too close, speeding, inadequate signal timing or phasing, and poor visibility of signals.

- High frequency of nighttime crashes on the approaches of Granite Street. Possible causes are poor visibility or lighting and poor sign quality.
- Three crashes involving people in crosswalks at Wood Road intersection. Likely causes of these crashes are restricted sight distance, inadequate protection for people walking and biking, inadequate signal phasing, and inattention
- Failed to yield the right of way, disregarded traffic control, and inattention were significant contributing factors

3.6.2 Excess Expected Crashes

MPO staff used MassDOT's crash-based screening tool to identify sites with excess expected average crash frequency that ranked in the top 5 percent and the next 10 percent in the MPO region. Figure 13 is a map of the sites with excess crash frequencies. Excess expected average crash frequency is the difference between expected and predicted average crash frequencies. If the predicted average crash frequency (crashes per year under idealized circumstances) is significantly less than the expected average crash frequency, it suggests that correctable factors are elevating the average crash frequency. These sites have a high potential for safety improvement.

3.6.3 Systemic Risk-Based Sites

Staff used MassDOT's risk-based screening tool to identify sites with the most significant risk of fatal and injury crashes based on risk factors identified for the emphasis areas in the Strategic Highway Safety Plan. Table 5 presents the primary and secondary risk sites. All three corridor segments have primary risk sites for risk factors such as older and younger drivers, distracted and impaired driving, and occupant protection. There was no primary risk site related to pedestrians and bicycles in the corridor, but all three segments had secondary risk sites pertaining to pedestrians and bicycles.

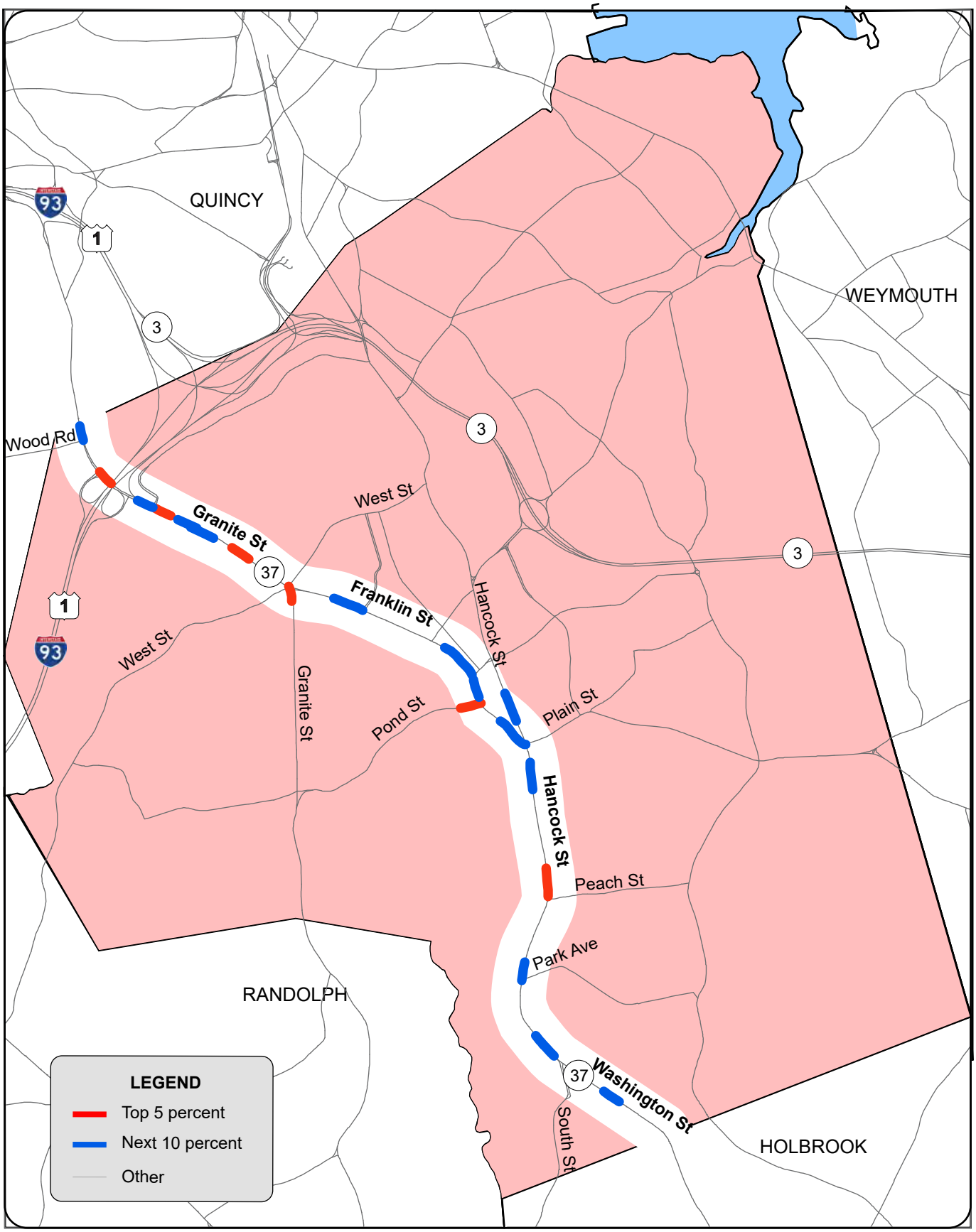

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Figure 13
Locations with Excess Expected Crashes Fatal and Injury (2013–17), Based on MPO Ranking

Route 37 Priority Corridor Study
Braintree, Massachusetts

Table 5
Risk-Based Primary and Secondary Sites in the Corridor

Emphasis Area	Primary Risk Site	Secondary Risk Site
Pedestrian and bicycle-related	None	Granite Street Franklin Street
Lane departure	None	Granite Street Hancock Street Washington Street
Older driver	Granite Street Central Street Hancock Street	Franklin Street Washington Street
Younger driver	Granite Street Franklin Street Hancock Street Washington Street	Granite Street Franklin Street
Distracted driving	Franklin Street Hancock Street Washington Street	Granite Street Franklin Street Washington Street
Impaired driving	Franklin Street	Granite Street Washington Street
Occupant protection	None	Granite Street Franklin Street Hancock Street Washington Street
Speeding	None	Franklin Street

3.7 COMMUNITY SURVEY

Staff developed a survey to help determine the public's opinion about concerns and problems on Route 37 in Braintree and how to resolve them. The online survey received 300 responses in July and August 2023. Figures 14 through 16 show the typical destinations in Braintree for respondents using Route 37 and the locations where respondents typically feel unsafe. The survey questionnaire, responses, and specific comments are included in Appendix F.

- Most respondents travel on Route 37 almost every day and typically drive in the corridor (86 percent), which underscores the automobile-centric nature of the corridor. However, a small proportion (20 percent) of the respondents also said they walk, bicycle, or take a bus in the corridor.
- A majority (90 percent) of the trips are work-, shop-, and recreation-related trips.
- Nearly 70 percent of the respondents travel outside of Braintree when they are using Route 37.

- Typical destinations in Braintree for respondents using Route 37 are South Shore Plaza, Five Corners, Braintree High School, and Braintree Station.
- Challenges for respondents who drive on Route 37 include
    - traffic congestion,
    - long wait times at intersections with traffic lights,
    - difficulty turning into or out of the side streets and driveways; and
    - difficulty crossing Route 37.
- Challenges for respondents who walk or bike on Route 37 include
    - poor quality sidewalks and gaps in the sidewalk network,
    - a lack of bike lanes,
    - high speeds of vehicles,
    - limited safe crossing opportunities, and
    - safety concerns.
- Thirty percent of the respondents who drive on Route 37 feel unsafe in the corridor, while 60 percent of the respondents who bike in the corridor feel unsafe in the corridor.
- Only 25 percent of respondents who walk or bike on Route 37 rate the nighttime conditions as good or very good, while 70 percent of respondents who drive on Route 37 rate the nighttime conditions as good or very good.
- Sixty percent of the respondents rate conditions of sidewalks along Route 37 as poor or very poor.
- Although most respondents reported driving in the corridor, they seemed highly receptive to improving facilities for walking and biking.
- Ninety percent of respondents support adding safer crossing opportunities and walking and biking infrastructure on Route 37.

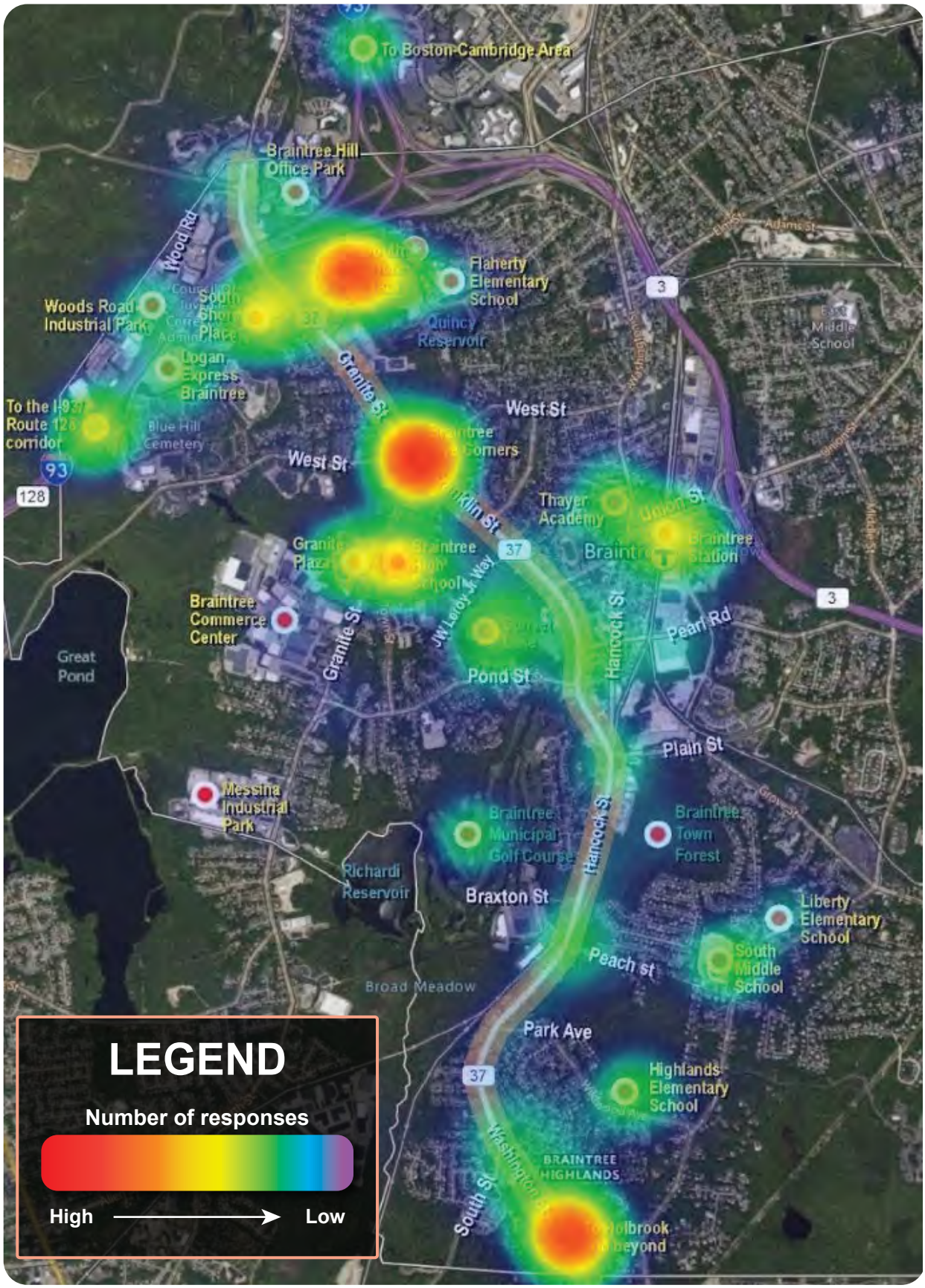

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Figure 14
Typical Destinations for People using Route 37

Route 37 Priority Corridor Study
Braintree, Massachusetts

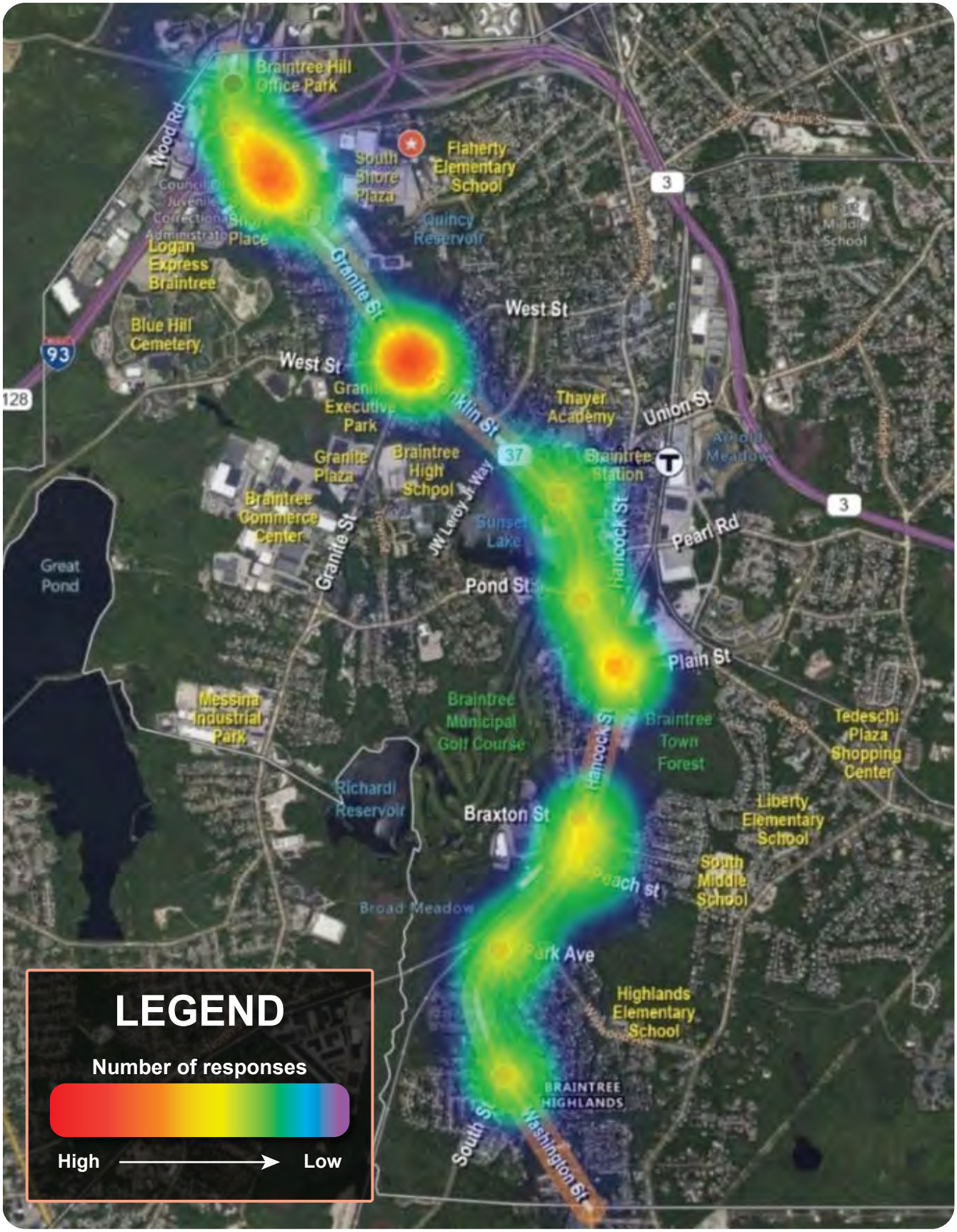

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Figure 15
Locations Where People Feel Unsafe Driving

Route 37 Priority Corridor Study
Braintree, Massachusetts

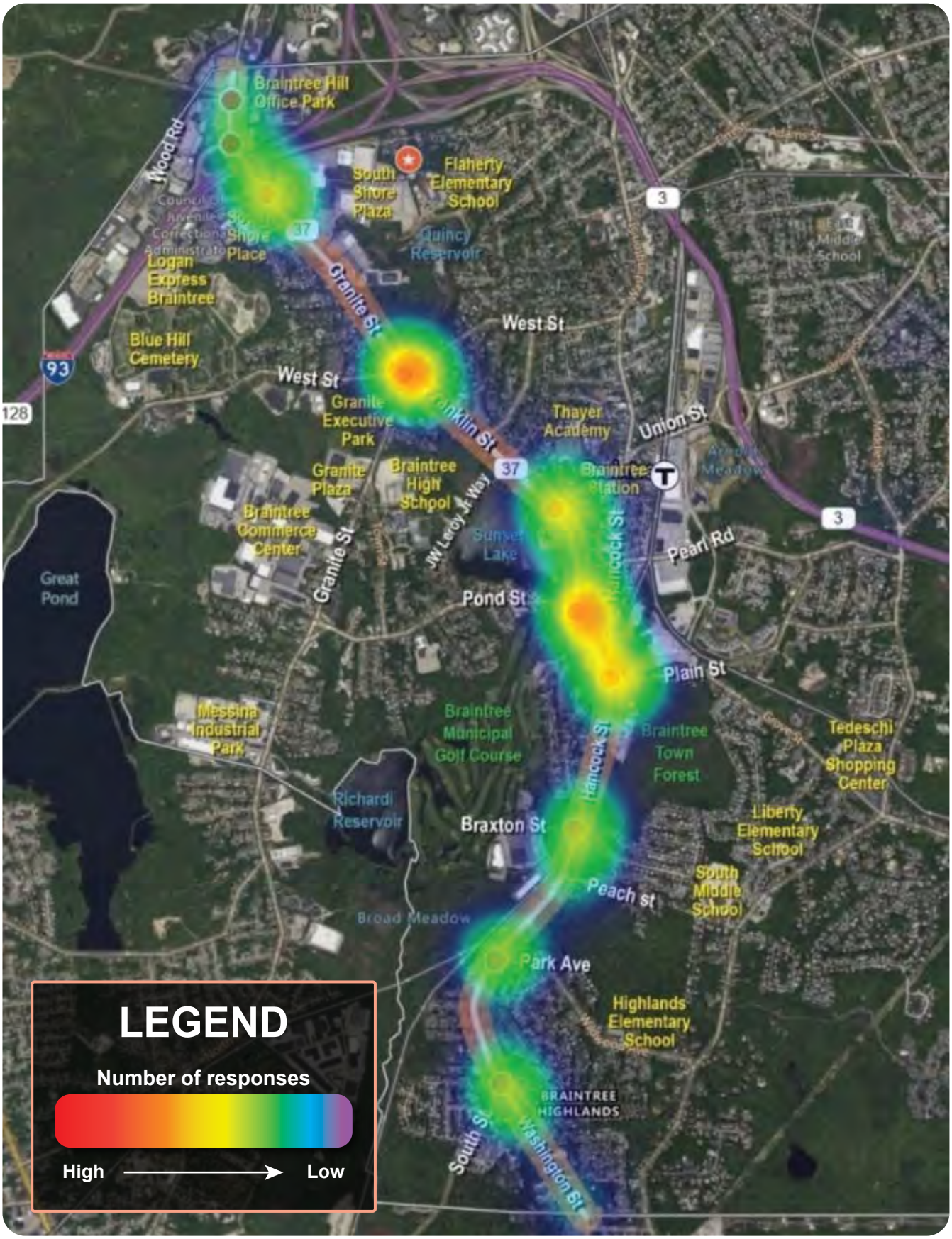

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Figure 16
Locations Where People Feel Unsafe Walking, Biking, or Using Assistive Mobility Device

Route 37 Priority Corridor Study
Braintree, Massachusetts

3.8 NEEDS ASSESSMENT

The presence of multiple land uses, including residential and commercial development, office and industrial parks, and educational and recreational areas adjacent to the corridor, creates an essential need for improving safety and multimodal mobility to access these types of land uses. Consequently, many of the issues in the Route 37 corridor arise from the multimodal roles the corridor serves or needs to serve. The following weaknesses, strengths, and needs of the corridor were identified through analysis of data, information gathered from a community survey, and feedback from the advisory committee.

3.8.1 Corridor Weaknesses

- Automobile-centric corridor that needs multimodal improvements
- Poor quality sidewalk conditions
- Gaps in the sidewalk network on Granite Street and Washington Street infrastructure
- Lack of bike infrastructure
- High vehicle speeds and volumes present safety concerns for people walking, biking, and driving
- Long waits at signalized intersections for people walking, taking the bus, and driving
- Localized traffic congestion at the following intersections:
    - Granite Street and Wood Road/Rockdale Street
    - Granite Street and Forbes Road
    - Five Corners
    - Franklin Street and Washington Street
    - Washington Street, Hancock Street, and Plain Street
    - Washington Street and Peach Street
- Three pedestrian and bicycle-related crashes in crosswalks at the intersection of Granite Street and Wood Road/Rockdale Street
- Two HSIP intersection crash clusters at the following intersections:
    - Granite Street and Forbes Road
    - Five Corners
- Five sites with excess expected crash sites in the top five percent of MPO ranking:
    - Granite Street segment at I-93 southbound ramp junction
    - Granite Street segment at Forbes Street
    - Granite Street at Five Corners
    - Hancock Street and Washington Street segment at Plain Street

    - Washington Street segment between Braxton Street and Plain Street
- Outdated traffic signal timings and signal equipment
- Lack of bus turnouts and bus priority service
- Poor street lighting in the corridor

3.8.2 Corridor Strengths

- Opportunities for multimodal transportation (walking, biking, driving, riding the bus, and using assistive mobility devices)
- Opportunities to improve access and connections to neighborhoods, workplaces, businesses, economic opportunities, and open space
- Major corridor with multiple land uses and transportation equity populations
- Opportunities to improve livability and quality of life of surrounding neighborhoods
- Vital link in the regional transportation system, including connections to the Route 128, Interstate 93, and Route 3, Commuter Rail, Red Line, and Braintree Station

3.8.3 Corridor Needs

In its current configuration, the corridor has significant deficiencies that impact the safety of users, mobility, and residents' quality of life and access to businesses and land uses along the corridor. The primary needs for improving the Route 37 corridor are safety, mobility, and accessibility. Multimodal mobility enhancements in the corridor can increase safety, connect users to recreational parks, open spaces, businesses, commercial centers, and educational institutions, and encourage people to take bus transit. The corridor needs include but are not limited to the following:

- Roadway amenities such as good-quality sidewalks, accessible curb ramps, and safe crossing opportunities.
- Quality infrastructure that meets the needs of people walking, biking, using assistive mobility devices, taking the bus, and driving.
- Infrastructure upgrades to improve safety and security for all users.
- Redesigns of the roadway and intersections to calm traffic, reduce high-vehicle speeds, and create a friendly environment for people walking and biking.
- Retime and optimize traffic signal systems to reduce congestion.

Chapter 4—Proposed Improvements

4.1 PROJECTS AND STUDIES

Identifying and reviewing recently completed, ongoing, and planned projects for the corridor is essential before developing additional improvements. This information was sourced from the Massachusetts Department of Transportation (MassDOT) project information database, construction and project updates from Braintree Public Works, and studies conducted by the Metropolitan Planning Organization (MPO). MPO staff reviewed the Braintree Complete Street Prioritization Program and extracted planned projects in the study corridor. Also, staff researched the publication database of the MPO to identify previous studies on Route 37 and its intersecting streets. Figure 17 shows the relevant projects and studies in the corridor.

4.2 NEAR-TERM IMPROVEMENTS

The corridor would immensely benefit from near-term improvements. The time frame considered near-term is typically less than five years, and the costs of improvements are under $50,000. The near-term improvements can be funded through maintenance budgets or included in MassDOT's projects currently in design. Most near-term improvements typically do not require design and engineering efforts. These improvements include installing new signs, upgrading old signs, marking pavement, painting high-visibility crosswalks, upgrading curb ramps to Americans with Disabilities Act (ADA) standards, and installing countdown timers for pedestrians. Other near-term improvements are adding bike detection, upgrading signal-head sections, adding backplates with yellow retroreflective borders, and repairing substandard sidewalks. Tables 6 through 8 present the near-term improvements in the corridor, including the cost category, and jurisdiction.

4.3 LONG-TERM IMPROVEMENTS

The time frame categorized as *long-term* is typically more than five years. Long-term improvements require design and engineering efforts and larger funding sources. The long-term improvements address safety and multimodal transportation needs, such as increased safety for people who walk, bicycle, or ride the bus, and support livable communities and economic vitality. They include safety improvements, such as major signal equipment and timing upgrades, bus signal priority, the addition of separated or protected bike facilities, construction of new sidewalks, reconstruction of sidewalks of poor quality, and reconstruction of intersections. Tables 9 through 11 present the long-term improvements in the corridor, including the cost category, and jurisdiction. Figures 18 through 26 show details of the near- and long-term improvements.

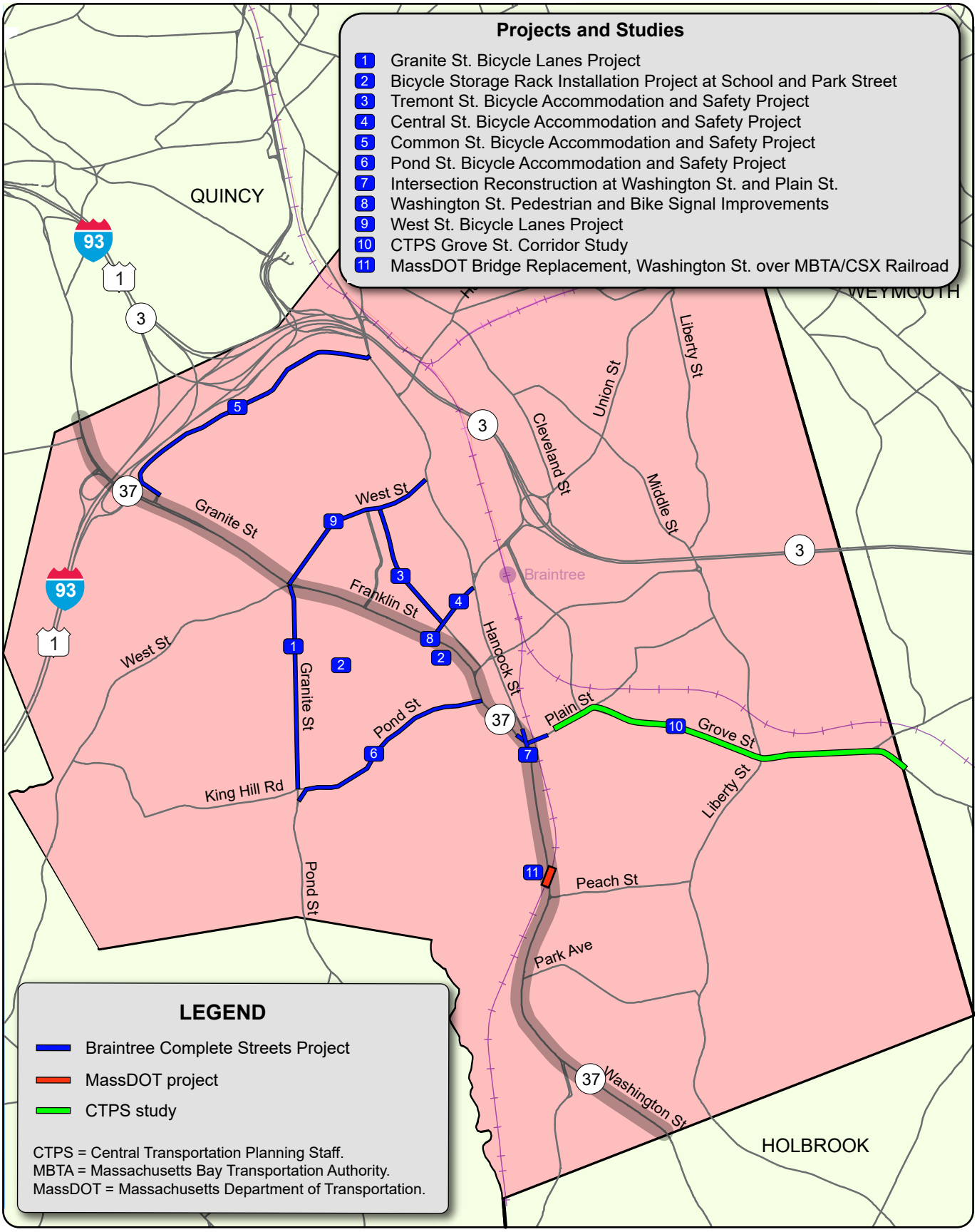

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Figure 17
Projects and Studies Near Route 37

Route 37 Priority Corridor Study
Braintree, Massachusetts

Table 6
Near-Term Improvements in the Granite Street Segment

Issue	Improvement	Cost	Jurisdiction
Pedestrian safety	Consider adding Leading Pedestrian Intervals (LPI) to the Wood Road/Rockdale Street signal phasing to increase pedestrian safety in crosswalks.*	Low	MassDOT
Pedestrian safety	Consider enhanced pedestrian signing for the Wood Road/Rockdale Street intersection, such as the Turning Vehicles Yield to Peds sign (R10-15).	Low	MassDOT
Pedestrian safety	Consider adding stop signs and crosswalks to the approach of Chickatawbut Road.	Low	DCR
Pedestrian safety	Evaluate and provide crosswalks where sidewalks end and continue on the other side of the roadway such as on North Street and Granite Street north leg at Wood Road.	Low	MassDOT
Pedestrian safety	Consider painting high-visibility crosswalks at the intersections of Wood Road/Rockdale Street.	Low	MassDOT
Pedestrian safety	Consider installing signs to remind motorists that they should expect to see and share the road with people who bike (W11-1 and W16-1P or R4-11).	Medium	MassDOT
Safety	Review and consider installing speed limit signs at regular distances to inform users of speed regulations.	Medium	MassDOT
Safety	Evaluate and consider adjusting change (yellow) and clearance (all red) intervals to meet MassDOT standards and to reduce rear-end crashes at signalized intersections.	Medium	MassDOT
Safety	Evaluate and consider aligning the existing signal heads better with their respective lanes.	Medium	MassDOT
Safety	Evaluate and consider installing advance intersection lane and traffic control signs to increase safety.	Low	MassDOT

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000.
* Leading Pedestrian Intervals (LPI) is used to establish pedestrian presence in crosswalk prior to providing green ball indications for drivers.
DCR = Department of Conservation and Recreation. MassDOT = Massachusetts Department of Transportation.

Table 7
Near-Term Improvements in the Franklin Street Segment

Issue	Improvement	Cost	Jurisdiction
Safety	Consider adding stop signs, stop lines, and crosswalks on minor road approach to Route 37.	Medium	MassDOT
Pedestrian safety	Consider working with residents and businesses to prohibit parking on sidewalks or shoulders.	Low	MassDOT/ Braintree
Safety	Consider painting “Do Not Block Intersection” pavement markings at the intersection of Washington Street and Pond Street. PM peak-period congestion at the Plain Street intersection causes traffic queues that regularly extend into the intersection of Pond Street and Washington Street.	Low	MassDOT
Bicyclist safety	Consider adding “Share the Road” signs (W11-1 and W16-1P) in the segment or shared-lane markings.	Medium	MassDOT
Safety	Review and consider installing speed limit signs at regular distances.	Medium	MassDOT
Safety	Provide dynamic speed feedback signs to reduce speed in the segment.	Medium	MassDOT
Safety	Consider painting lane-use arrow markings on the westbound approach of Plain Street.	Low	MassDOT
Safety	Consider trimming vegetation on the approach of Central Street to increase visibility.	Low	MassDOT
Safety	Review and update signal indications (left turns) for Plain Street westbound traffic to eliminate driver confusion.	Medium	MassDOT

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000.
MassDOT = Massachusetts Department of Transportation.

Table 8
Near-Term Improvements in the Hancock Street and Washington Street Segment

Issue	Improvement	Cost	Jurisdiction
Pedestrian safety	Consider installing advance pedestrian warning signs for the signalized midblock crosswalk near Park Avenue to alert drivers and reduce red-light running.	Low	MassDOT
Safety	Review and consider installing speed limit signs at regular distances.	Medium	MassDOT
Safety	Provide dynamic speed feedback signs in the segment.	Medium	MassDOT

Safety	Consider adding signal backplates with yellow retroreflective borders to the signal heads at these intersections: • Washington Street at Braxton Street • Washington Street at Roosevelt Street.	Medium	MassDOT
Safety	Consider trimming tree branches obscuring traffic signal heads at the Braxton Street intersection.	Low	MassDOT
Safety	Consider installing signal ahead signs (W3-3) on Washington Street for drivers approaching the traffic signal at the intersection with Braxton Street.	Low	MassDOT

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000. MassDOT = Massachusetts Department of Transportation.

Table 9
Long-Term Improvements in the Granite Street Segment

Issue	Improvement	Cost	Jurisdiction
Pedestrian safety	Consider constructing new sidewalks to close the gaps in the sidewalk network.	High	MassDOT
Pedestrian safety	Evaluate and provide continuous and connected sidewalks on the western side of Granite Street to prevent people walking from switching sides.	High	MassDOT
Pedestrian safety	Evaluate and upgrade curb ramps to ADA standards at these intersections: • Chickatawbut Road • I-93 ramp junctions • Middle Mall entrance (South Shore Plaza Road) • Five Corners.	High	MassDOT/ DCR
Bike safety	As the land uses along Granite Street changes, consider reconstructing Granite Street and making cross sectional design changes to accommodate safe walking and biking infrastructure and bus transit accommodation.	High	MassDOT
Bike safety	Evaluate and install bike detection at all signalized intersections in the segment.	Medium	MassDOT
Safety	Evaluate and consider adding backplates with yellow retroreflective borders to the signal heads to increase visibility at night.	High	MassDOT
Safety	Evaluate and upgrade signal equipment (span-wire mounts to mast-arm mounts, one signal head per lane, countdown timers, accessible pedestrian signal) to increase safety.	High	MassDOT
Pedestrian safety	Evaluate and install a crosswalk on all approaches to signalized intersections	Medium	MassDOT

	(requires new pedestrian signals and signal timing updates)		
Safety	Review and set target speeds in segments consistent with the corridor context and current land uses. Requires a speed study and traffic calming measures to reduce speeds to the target.	High	MassDOT
Safety	Consider measures to calm traffic and reduce speeding in the segment during off-peak periods, such as narrow lanes, adding shoulders, and timing signals to reduce speeding opportunities.	High	MassDOT
Safety	Consider installing pavement treatments to prevent distracted driving.	Medium	MassDOT
Safety	Evaluate and provide better lighting at night to reduce crashes during dark conditions.	High	MassDOT/ Braintree
Safety	Consider improving the visibility of signals and signs at Forbes Street and Five Corners intersections to reduce the angle and rear-end crashes.	Medium	MassDOT
Bus transit operations	Consider working with MBTA to incorporate bus signal priority into the traffic signal system.	High	MassDOT/ MBTA

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000. ADA = Americans with Disabilities Act. DCR = Department of Conservation and Recreation. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority.

Table 10
Long-Term Improvements in the Franklin Street Segment

Issue	Improvement	Cost	Jurisdiction
Pedestrian safety	Evaluate and install a Rectangular Rapid Flashing Beacon for the crosswalk across Franklin Street at JW Leroy Way.	Medium	MassDOT
Pedestrian safety	Consider adding RRFB or crossing signs (W11-2 and W16-7P) for the midblock crosswalks across Franklin Street near McMaster Funeral Home.	Medium	MassDOT
Pedestrian safety	Consider countdown timers at these intersections: • Franklin Street at Washington Street • Washington Street at Pond Street • Washington Street at Hancock Street and Plain Street.	Medium	MassDOT
Pedestrian safety	Consider reconstructing sidewalks on both sides of Franklin Street.	High	MassDOT
Safety	Conduct a Road Safety Audit for the Washington, Hancock, and Plain Street intersections.	Medium	MassDOT

Safety	Evaluate and consider adding signal backplates with yellow retroreflective borders to the signal heads at these intersections: • Franklin Street at Washington Street • Washington Street at Pond Street • Washington Street at Hancock Street and Plain Street.	High	MassDOT
Congestion	Consider retiming these traffic signals with current data: • Franklin Street at Washington Street • Washington Street at Pond Street • Washington Street at Hancock Street and Plain Street.	High	MassDOT
Safety	Review and set target speed regulations consistent with the corridor context and land use. Requires speed study and other measures to achieve the target and improvement measures to achieve the target speed.	High	MassDOT
Safety	Evaluate and provide better lighting at night to reduce crashes during dark conditions.	High	MassDOT
Bus transit operations	Consider working with MBTA to incorporate bus signal priority into the signal system.	High	MassDOT

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000. MassDOT = Massachusetts Bay Transportation Authority. MBTA = Massachusetts Bay Transportation Authority. RRFB = Rectangular Rapid Flashing Beacon.

Table 11
Long-Term Improvements in the Hancock Street/Washington Street Segment

Issue	Improvement	Cost	Jurisdiction
Pedestrian safety	Consider installing a sidewalk on the western side of Washington Street between Braxton Street and Peach Street.	High	MassDOT
Pedestrian safety	Consider reconstructing sidewalks on both sides of Hancock Street.	High	MassDOT
Pedestrian safety	Consider upgrading the uncontrolled marked crosswalk on Route 37 between Arbutus Avenue and Hillview Road to an RRFB.	Medium	MassDOT
Bicycle safety	Consider installing separated bike lanes on Washington Street and Hancock Street from Arbutus Avenue to Plain Street. There is space in the roadway pavement width for the improvements.	High	MassDOT
Safety	Evaluate and provide better lighting at night to reduce crashes during dark conditions.	High	MassDOT

Safety	Consider installing pavement treatments to prevent distracted driving.	Medium	MassDOT
Safety and congestion	Consider signalizing the Peach Street intersection to improve traffic safety and reduce congestion and speeding.	High	MassDOT
Safety	Review and set target speed regulations consistent with the corridor context and land use. Requires speed study and improvement measures to achieve the target speed such as narrower lanes, adding bike lanes, bus turnouts, and installation of a traffic signal.	High	MassDOT
Safety	Consider installing traffic calming measures to reduce the speeds of vehicles (narrow lanes, signals, bike lanes, and bus turnouts).	High	MassDOT
Congestion	Consider retiming the traffic signal at Braxton Street with current data.	Medium	MassDOT
Bus transit operations	Consider working with MBTA to incorporate bus signal priority into the signal system.	High	MassDOT
Bus transit operations	Consider incorporating bus turnouts into any future separated bike lanes in the segment.	Medium	MassDOT

Note: Low cost = less than $10,000. Medium cost = $10,001 to $50,000. High cost = more than $50,000. MassDOT = Massachusetts Bay Transportation Authority. MBTA = Massachusetts Bay Transportation Authority. RRFB = Rectangular Rapid Flashing Beacon.

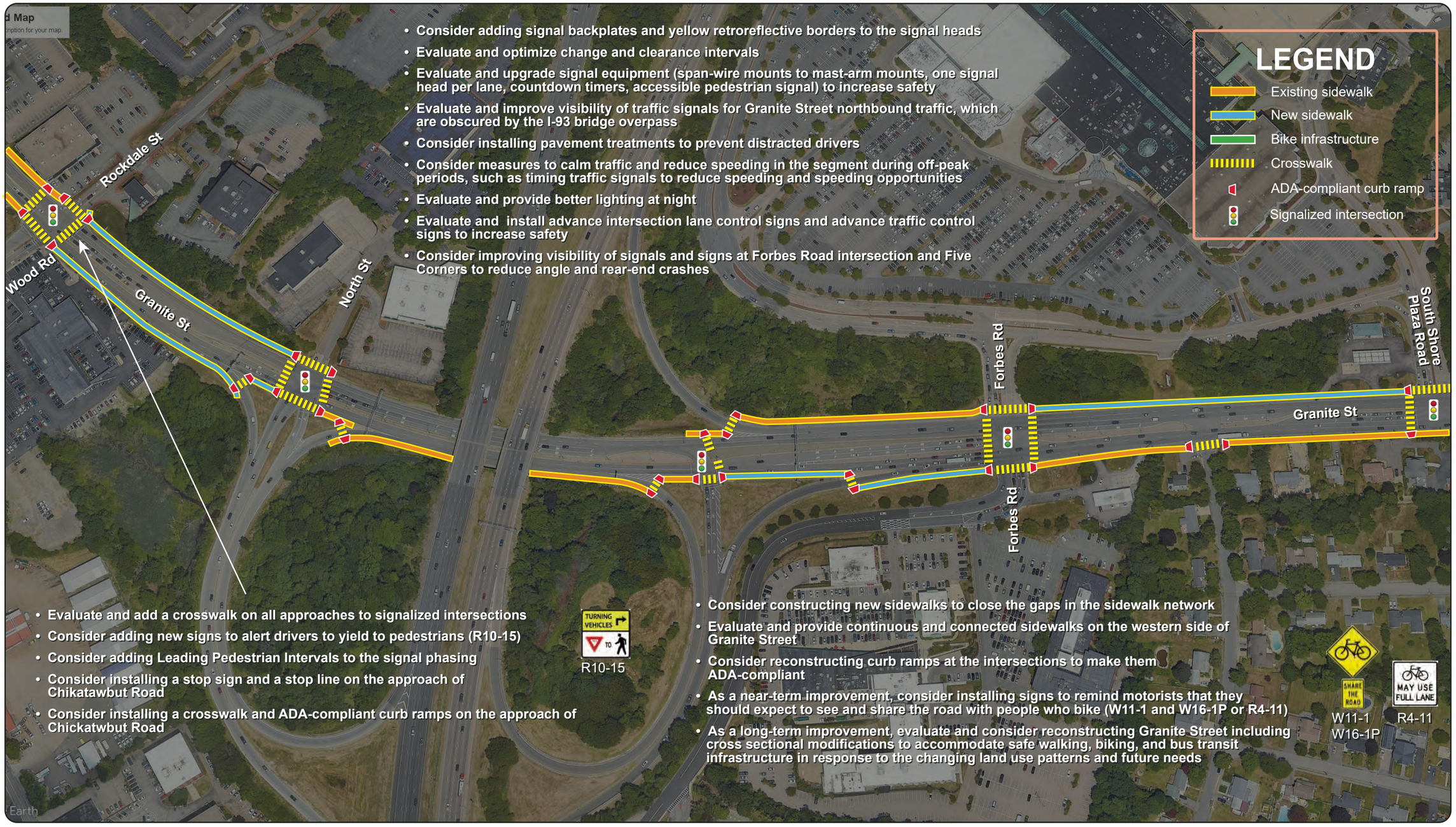
Rockdale St
Wood Rd
Granite St
North St
Forbes Rd
South Shore Plaza Road
Granite St
Forbes Rd
LEGEND
Existing sidewalk
New sidewalk
Bike infrastructure
Crosswalk
ADA-compliant curb ramp
Signalized intersection
• Consider adding signal backplates and yellow retroreflective borders to the signal heads
• Evaluate and optimize change and clearance intervals
• Evaluate and upgrade signal equipment (span-wire mounts to mast-arm mounts, one signal head per lane, countdown timers, accessible pedestrian signal) to increase safety
• Evaluate and improve visibility of traffic signals for Granite Street northbound traffic, which are obscured by the I-93 bridge overpass
• Consider installing pavement treatments to prevent distracted drivers
• Consider measures to calm traffic and reduce speeding in the segment during off-peak periods, such as timing traffic signals to reduce speeding and speeding opportunities
• Evaluate and provide better lighting at night
• Evaluate and install advance intersection lane control signs and advance traffic control signs to increase safety
• Consider improving visibility of signals and signs at Forbes Road intersection and Five Corners to reduce angle and rear-end crashes
• Evaluate and add a crosswalk on all approaches to signalized intersections
• Consider adding new signs to alert drivers to yield to pedestrians (R10-15)
• Consider adding Leading Pedestrian Intervals to the signal phasing
• Consider installing a stop sign and a stop line on the approach of Chikatawbut Road
• Consider installing a crosswalk and ADA-compliant curb ramps on the approach of Chickatwbut Road
TURNING VEHICLES
TO
R10-15
• Consider constructing new sidewalks to close the gaps in the sidewalk network
• Evaluate and provide continuous and connected sidewalks on the western side of Granite Street
• Consider reconstructing curb ramps at the intersections to make them ADA-compliant
• As a near-term improvement, consider installing signs to remind motorists that they should expect to see and share the road with people who bike (W11-1 and W16-1P or R4-11)
• As a long-term improvement, evaluate and consider reconstructing Granite Street including cross sectional modifications to accommodate safe walking, biking, and bus transit infrastructure in response to the changing land use patterns and future needs
SHARE THE ROAD
W11-1
W16-1P
MAY USE FULL LANE
R4-11

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Figure 18
Proposed Improvements for Granite Street Segment

Route 37 Priority Corridor Study, Braintree, Massachusetts

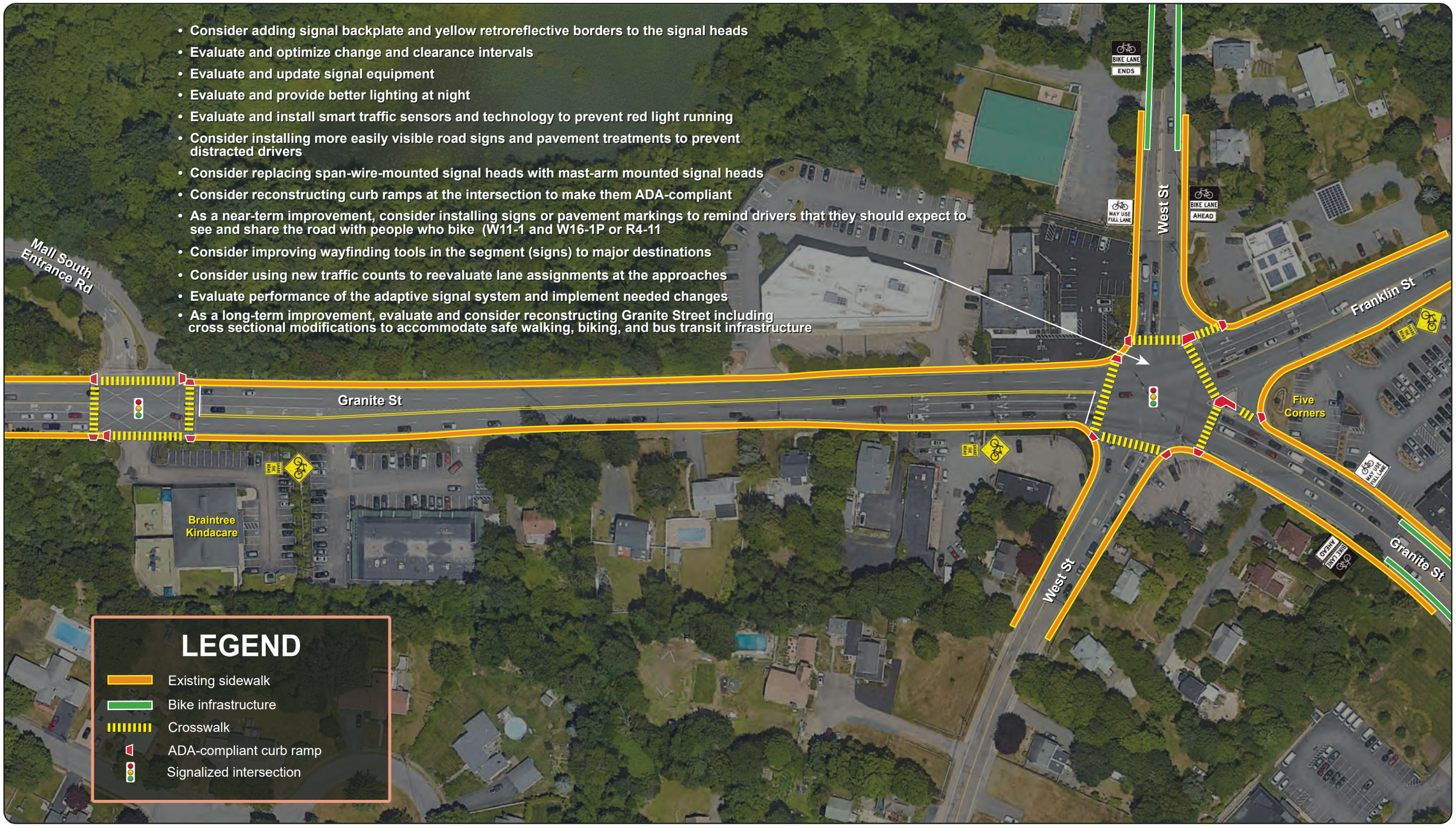
• Consider adding signal backplate and yellow retroreflective borders to the signal heads
• Evaluate and optimize change and clearance intervals
• Evaluate and update signal equipment
• Evaluate and provide better lighting at night
• Evaluate and install smart traffic sensors and technology to prevent red light running
• Consider installing more easily visible road signs and pavement treatments to prevent distracted drivers
• Consider replacing span-wire-mounted signal heads with mast-arm mounted signal heads
• Consider reconstructing curb ramps at the intersection to make them ADA-compliant
• As a near-term improvement, consider installing signs or pavement markings to remind drivers that they should expect to see and share the road with people who bike (W11-1 and W16-1P or R4-11
• Consider improving wayfinding tools in the segment (signs) to major destinations
• Consider using new traffic counts to reevaluate lane assignments at the approaches
• Evaluate performance of the adaptive signal system and implement needed changes
• As a long-term improvement, evaluate and consider reconstructing Granite Street including cross sectional modifications to accommodate safe walking, biking, and bus transit infrastructure
Mall South Entrance Rd
Granite St
Braintree Kindacare
West St
BIKE LANE ENDS
BIKE LANE AHEAD
MAY USE FULL LANE
Franklin St
Five Corners
Granite St
West St
LEGEND
Existing sidewalk
Bike infrastructure
Crosswalk
ADA-compliant curb ramp
Signalized intersection

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Figure 19
Proposed Improvements at Five Corners

Route 37 Priority Corridor Study, Braintree, Massachusetts

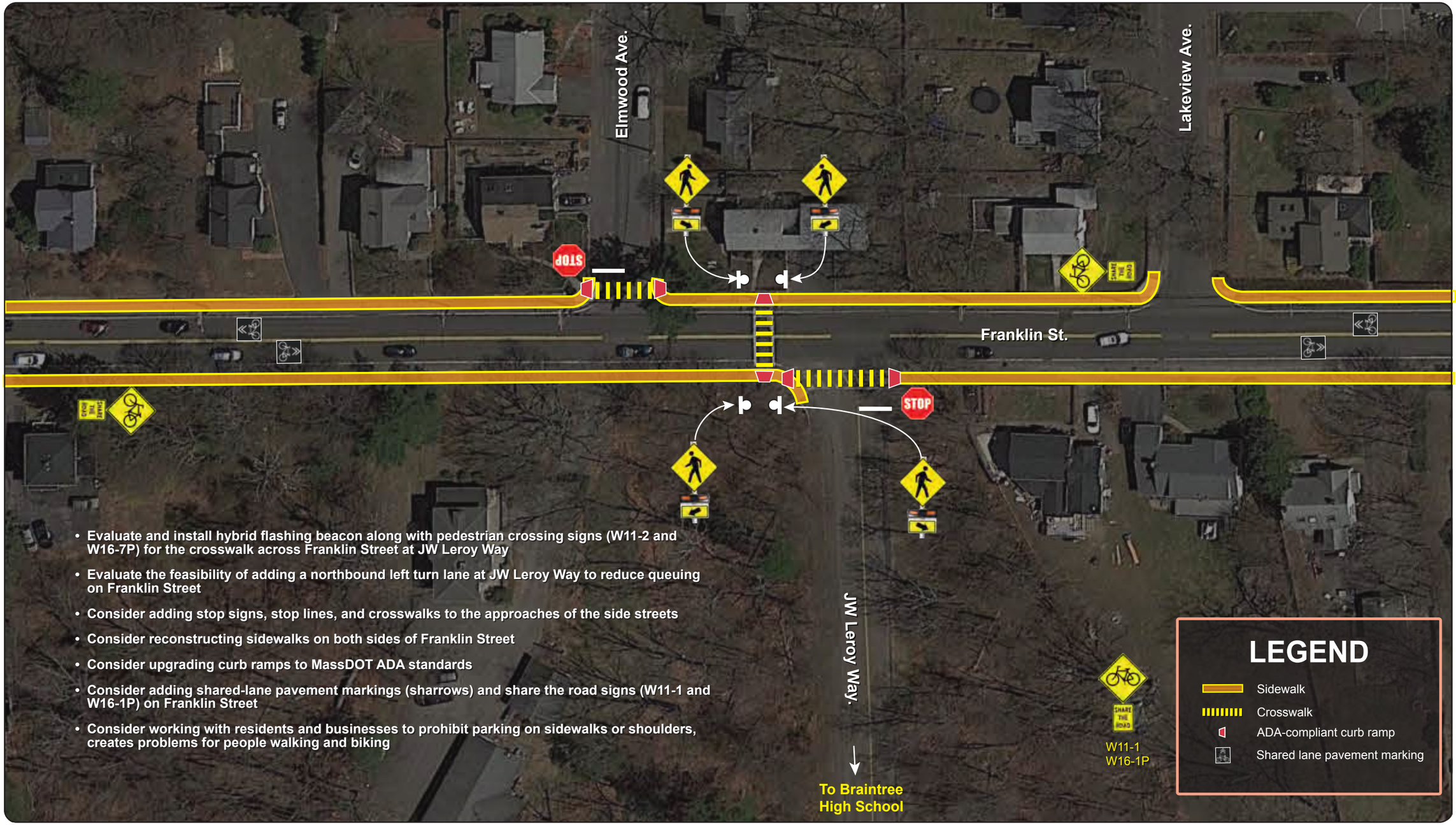
Elmwood Ave.
Lakeview Ave.
Franklin St.
STOP
STOP
JW Leroy Way.
To Braintree
High School
W11-1
W16-1P
• Evaluate and install hybrid flashing beacon along with pedestrian crossing signs (W11-2 and W16-7P) for the crosswalk across Franklin Street at JW Leroy Way
• Evaluate the feasibility of adding a northbound left turn lane at JW Leroy Way to reduce queuing on Franklin Street
• Consider adding stop signs, stop lines, and crosswalks to the approaches of the side streets
• Consider reconstructing sidewalks on both sides of Franklin Street
• Consider upgrading curb ramps to MassDOT ADA standards
• Consider adding shared-lane pavement markings (sharrows) and share the road signs (W11-1 and W16-1P) on Franklin Street
• Consider working with residents and businesses to prohibit parking on sidewalks or shoulders, creates problems for people walking and biking
LEGEND
Sidewalk
Crosswalk
ADA-compliant curb ramp
Shared lane pavement marking

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Figure 20
Proposed Improvements
Franklin Street at J.W. Leroy Way

Route 37 Priority Corridor Study,
Braintree, Massachusetts

LEGEND
Existing sidewalk
Crosswalk
ADA-compliant curb ramp
Signalized intersection
Shared-lane pavement marking
Washington St
Franklin St
Washington St
Thayer Pl
Frederick Rd
Washington St
Pond St
• Consider reconstructing sidewalks on both sides of Franklin Street
• Consider adding shared-lane pavement markings (sharrows) or share the road signs (W11-1 and W16-1P)
• Consider upgrading curb ramps at the intersection of Franklin and Washington Street to ADA standards
• Consider repairing or reconstructing sidewalks on both sides of Franklin Street
• Consider painting do not block intersection pavement markings at the intersection of Washington Street and Pond Street as PM peak-period congestion at the Plain Street intersection causes a traffic queue that regularly extends into the intersection.
• Consider retiming the traffic signals with current traffic data to reduce congestion
• Evaluate and upgrade signal equipment at the intersections of Washington Street at Franklin Street and Pond Street (poles, pedestrian signals, yellow retroreflective borders, and countdown timers)
Earth

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Figure 21
Proposed Improvements
Washington Street from Franklin Street to Pond Street

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Braintree, Massachusetts

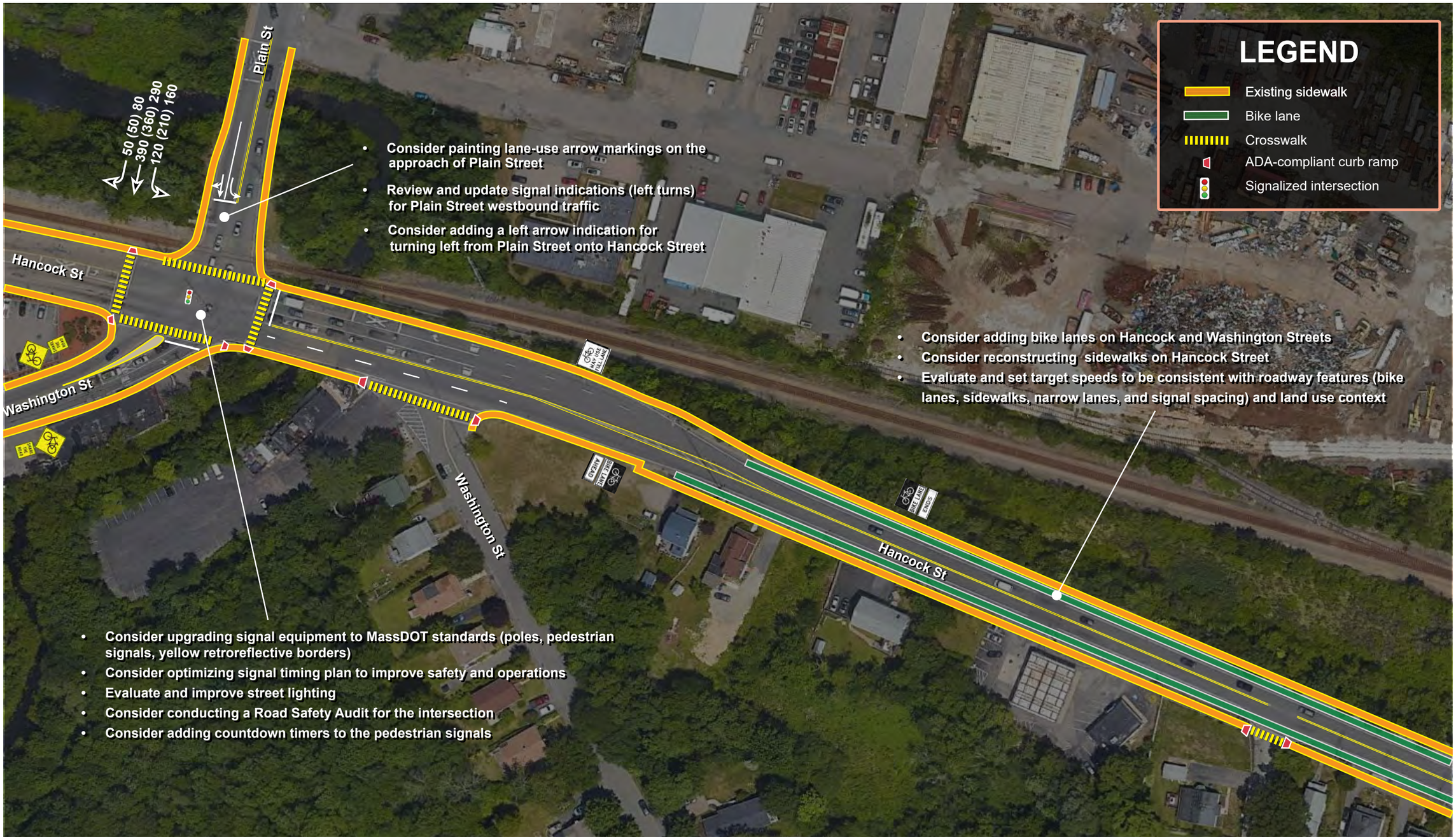
LEGEND
Existing sidewalk
Bike lane
Crosswalk
ADA-compliant curb ramp
Signalized intersection
Plain St
50 (50) 80
390 (360) 290
120 (210) 160
Hancock St
Washington St
Washington St
Hancock St
• Consider painting lane-use arrow markings on the approach of Plain Street
• Review and update signal indications (left turns) for Plain Street westbound traffic
• Consider adding a left arrow indication for turning left from Plain Street onto Hancock Street
• Consider adding bike lanes on Hancock and Washington Streets
• Consider reconstructing sidewalks on Hancock Street
• Evaluate and set target speeds to be consistent with roadway features (bike lanes, sidewalks, narrow lanes, and signal spacing) and land use context
• Consider upgrading signal equipment to MassDOT standards (poles, pedestrian signals, yellow retroreflective borders)
• Consider optimizing signal timing plan to improve safety and operations
• Evaluate and improve street lighting
• Consider conducting a Road Safety Audit for the intersection
• Consider adding countdown timers to the pedestrian signals

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Figure 22
Proposed Improvements
Washington Street at Hancock Street and Plain Street

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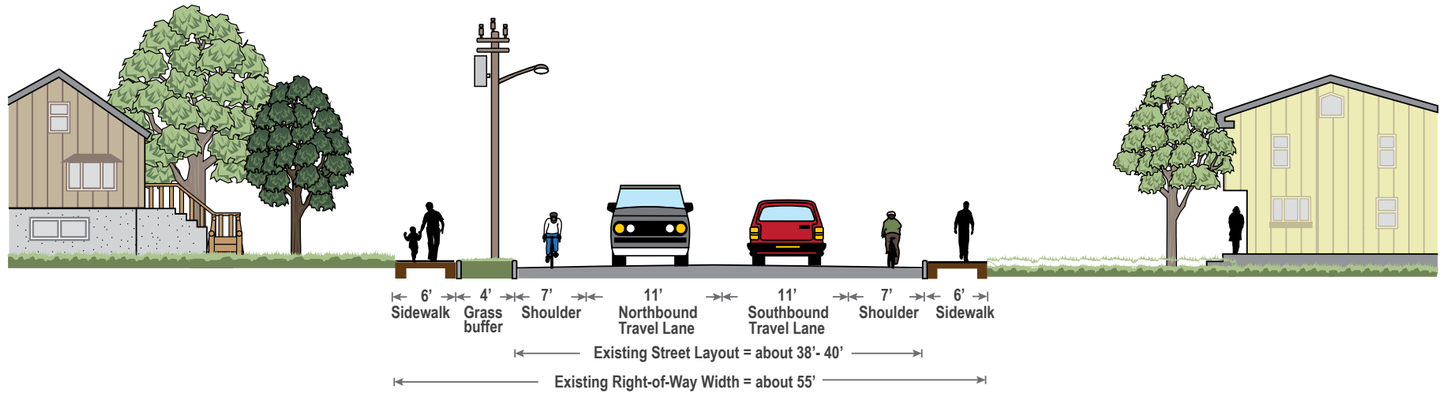
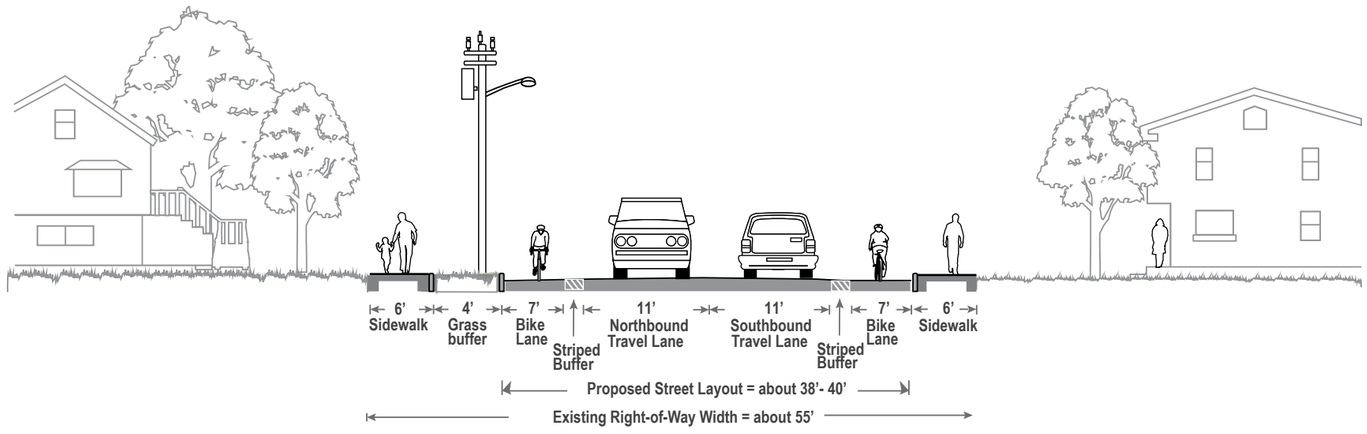


Existing Roadway Cross Section



Potential Improvements

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Figure 23
Proposed Improvements
Proposed Cross Section Modifications for Hancock/Washington Streets Segment

Route 37 Priority Corridor Study,
Braintree, Massachusetts

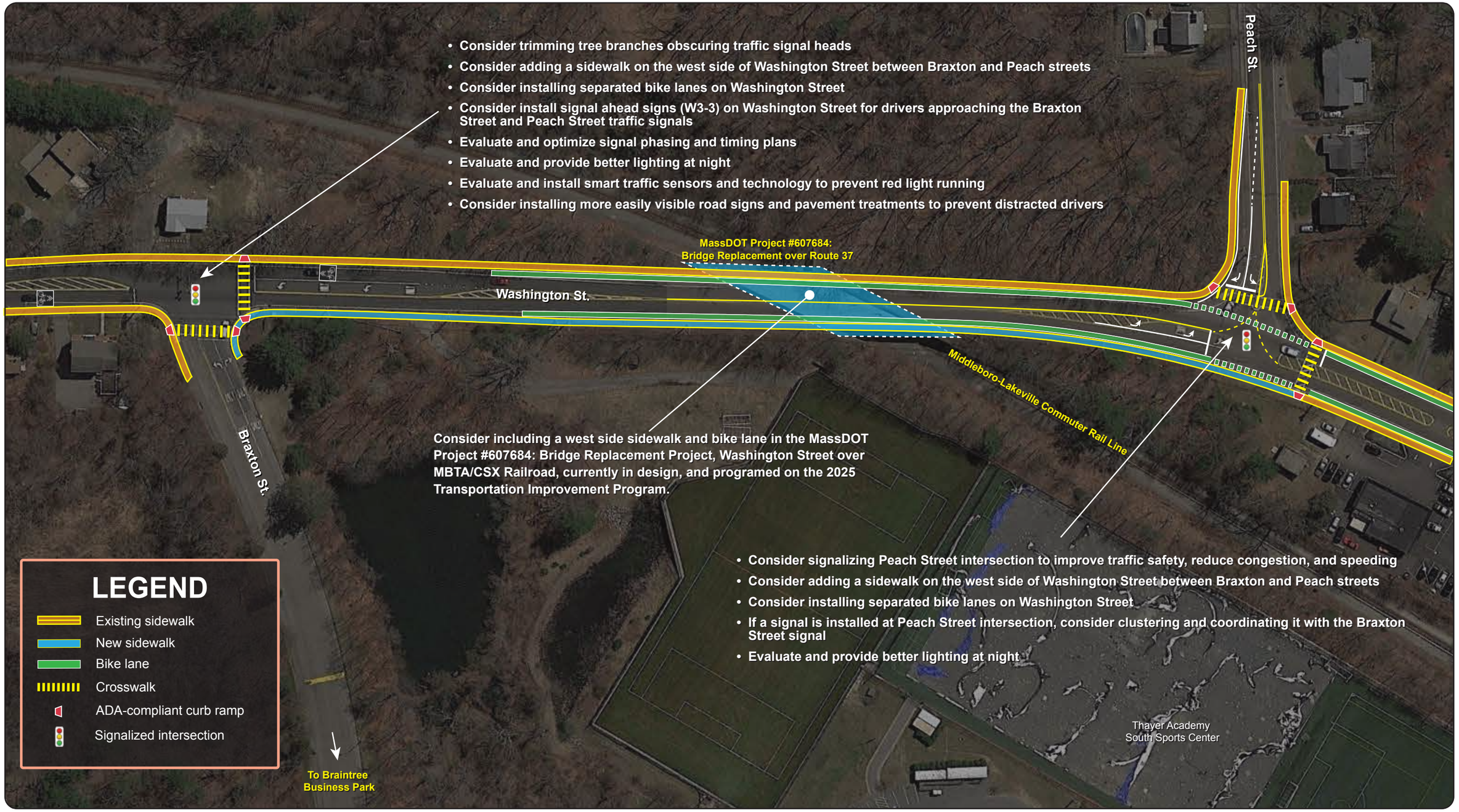
• Consider trimming tree branches obscuring traffic signal heads
• Consider adding a sidewalk on the west side of Washington Street between Braxton and Peach streets
• Consider installing separated bike lanes on Washington Street
• Consider install signal ahead signs (W3-3) on Washington Street for drivers approaching the Braxton Street and Peach Street traffic signals
• Evaluate and optimize signal phasing and timing plans
• Evaluate and provide better lighting at night
• Evaluate and install smart traffic sensors and technology to prevent red light running
• Consider installing more easily visible road signs and pavement treatments to prevent distracted drivers
MassDOT Project #607684:
Bridge Replacement over Route 37
Washington St.
Peach St.
Braxton St.
Middleboro-Lakeville Commuter Rail Line
Consider including a west side sidewalk and bike lane in the MassDOT Project #607684: Bridge Replacement Project, Washington Street over MBTA/CSX Railroad, currently in design, and programed on the 2025 Transportation Improvement Program.
• Consider signalizing Peach Street intersection to improve traffic safety, reduce congestion, and speeding
• Consider adding a sidewalk on the west side of Washington Street between Braxton and Peach streets
• Consider installing separated bike lanes on Washington Street
• If a signal is installed at Peach Street intersection, consider clustering and coordinating it with the Braxton Street signal
• Evaluate and provide better lighting at night
LEGEND
Existing sidewalk
New sidewalk
Bike lane
Crosswalk
ADA-compliant curb ramp
Signalized intersection
To Braintree
Business Park
Thayer Academy
South Sports Center

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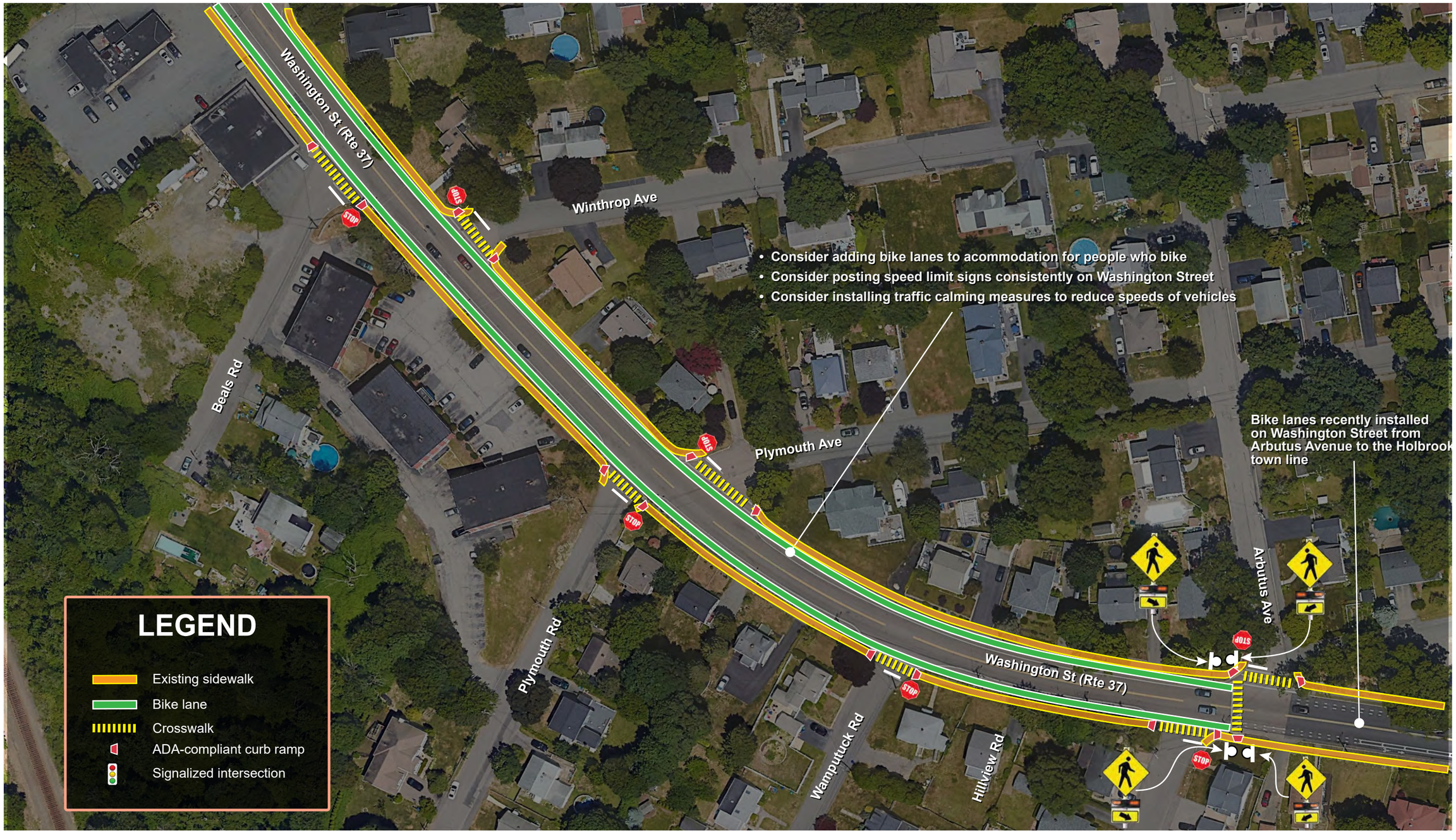
Figure 24
Proposed Improvements
Washington Street from Braxton Street to Peach Street

Route 37 Priority Corridor Study,
Braintree, Massachusetts


Washington St (Rte 37)
Winthrop Ave
Beals Rd
Plymouth Ave
Plymouth Rd
Wamputuck Rd
Hillview Rd
Arbutus Ave
Washington St (Rte 37)
STOP
• Consider adding bike lanes to acommodation for people who bike
• Consider posting speed limit signs consistently on Washington Street
• Consider installing traffic calming measures to reduce speeds of vehicles
Bike lanes recently installed on Washington Street from Arbutus Avenue to the Holbrook town line
LEGEND
Existing sidewalk
Bike lane
Crosswalk
ADA-compliant curb ramp
Signalized intersection

BOSTON REGION MPO

Figure 25
Proposed Improvements
Washington Street at Arbutus Avenue

Route 37 Priority Corridor Study, Braintree, Massachusetts

4.3 OPERATIONAL IMPACTS OF PROPOSED IMPROVEMENTS

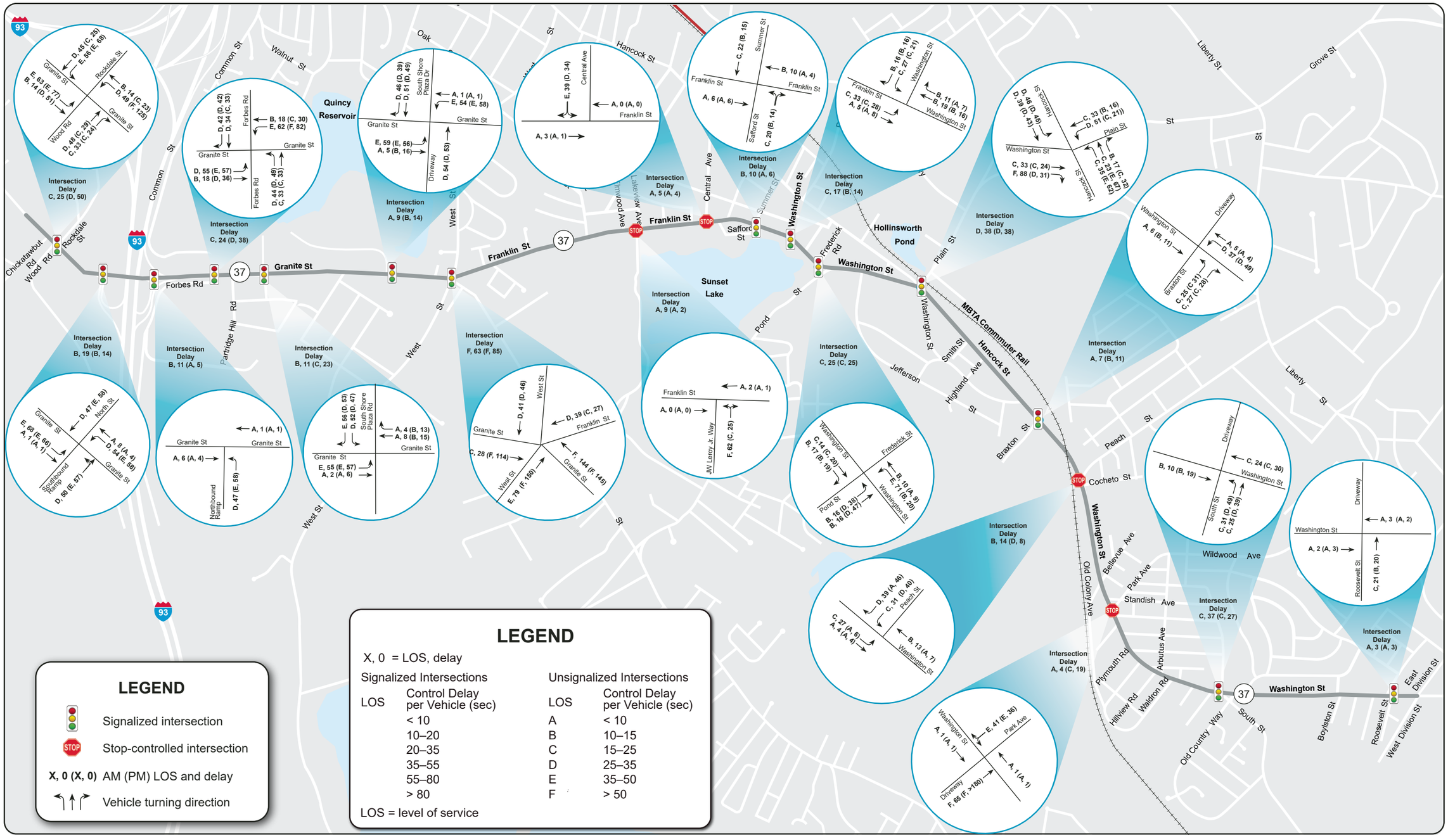
The Boston Region MPO's transportation planning model (TDM 23) was used to forecast traffic for this study. The model's socioeconomic components are derived from forecasts produced by the Metropolitan Area Planning Commission. TDM 23 was adopted for travel demand modeling for the Long-Range Transportation Plan. Using this model, staff projected that between now and 2035, traffic volumes on Route 37 in Braintree would grow by approximately 0.679 percent annually in the AM peak and PM peak periods. These growth rates also apply to traffic volumes on the intersecting streets, as they are usually developed for areas, not specific streets. Figures 26 through 29 show the Level of Service (LOS) projected for 2035 with and without the proposed improvements.

Table 12 presents the measures of effectiveness of the no-build and build scenarios. The analysis indicated that by 2035, if no improvement is implemented in the corridor, travel conditions would worsen, total delays could increase by 29 percent, total travel time could increase by 18 percent, and greenhouse gas emissions would increase by 16 percent during the AM and PM peak travel periods. If the proposed improvements are implemented, travel conditions in 2035, such as total delays, travel time, and greenhouse gas emissions, are expected to increase slightly or remain at 2023 levels.

Table 12
Measures of Effectiveness

Measures of Effectiveness	Peak Period	2023 Existing	2035 No Build	2035 Build
Total Delay (hours)	AM	222	270 (21%)	222 (0%)
Total Delay (hours)	PM	342	430 (26%)	333 (-3%)
Total Delay (hours)	Sat PM	274	352 (29%)	304 (11%)
Total Travel Time (hours)	AM	531	627(18%)	546 (3%)
Total Travel Time (hours)	PM	676	796 (18%)	690 (2%)
Total Travel Time (hours)	Sat PM	591	692 (17%)	643 (9%)
Total Emissions (Kg)	AM	64	73 (14%)	67 (5%)
Total Emissions (Kg)	PM	82	95 (16%)	78 (-5%)
Total Emissions (kg)	Sat PM	70	79 (13%)	75 (7%)

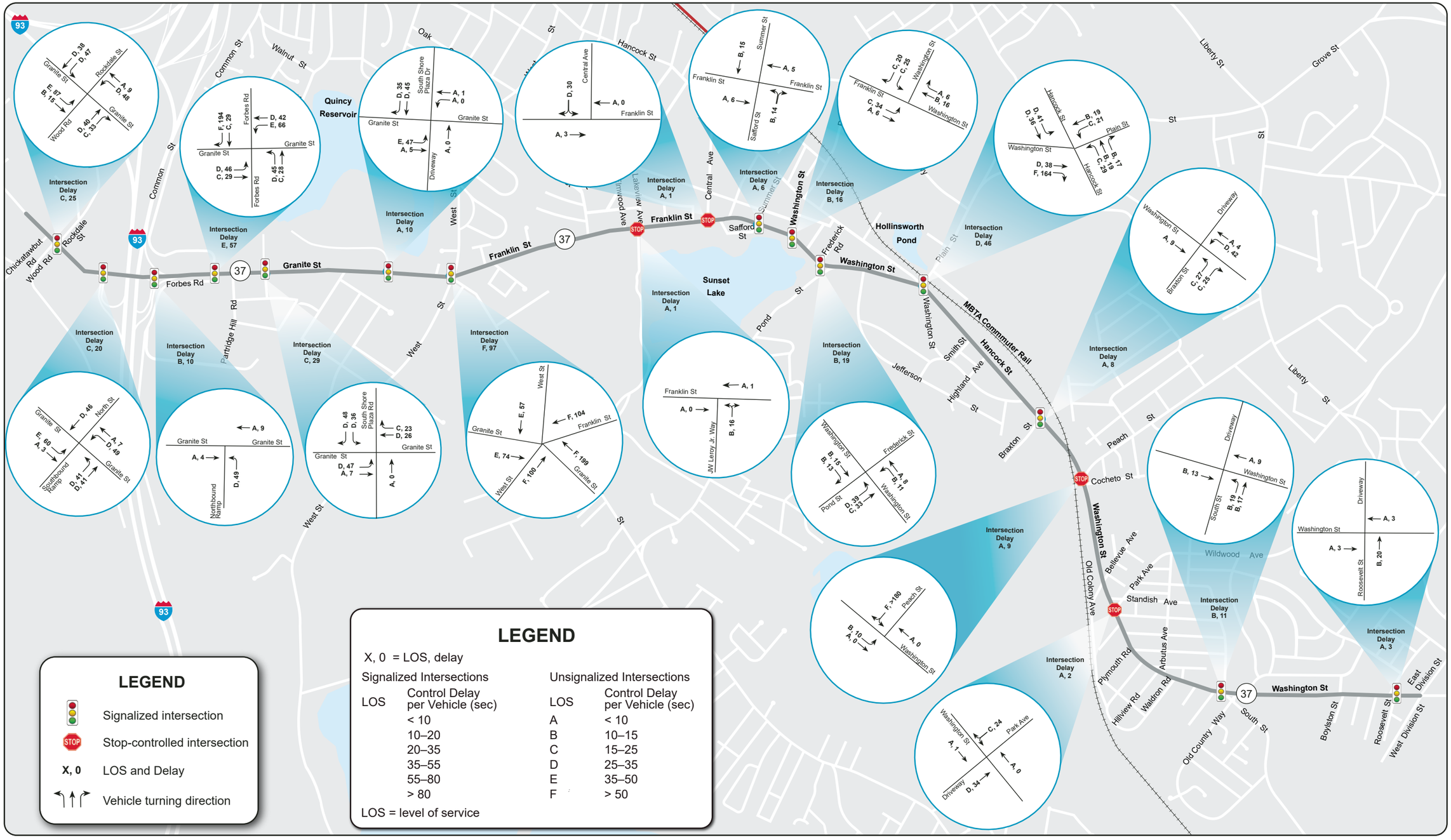
Note: The value in the parenthesis is the percentage change from existing conditions



BOSTON REGION MPO

Figure 26
2035 No-Build Conditions
Weekday Peak-Hours LOS and Delays

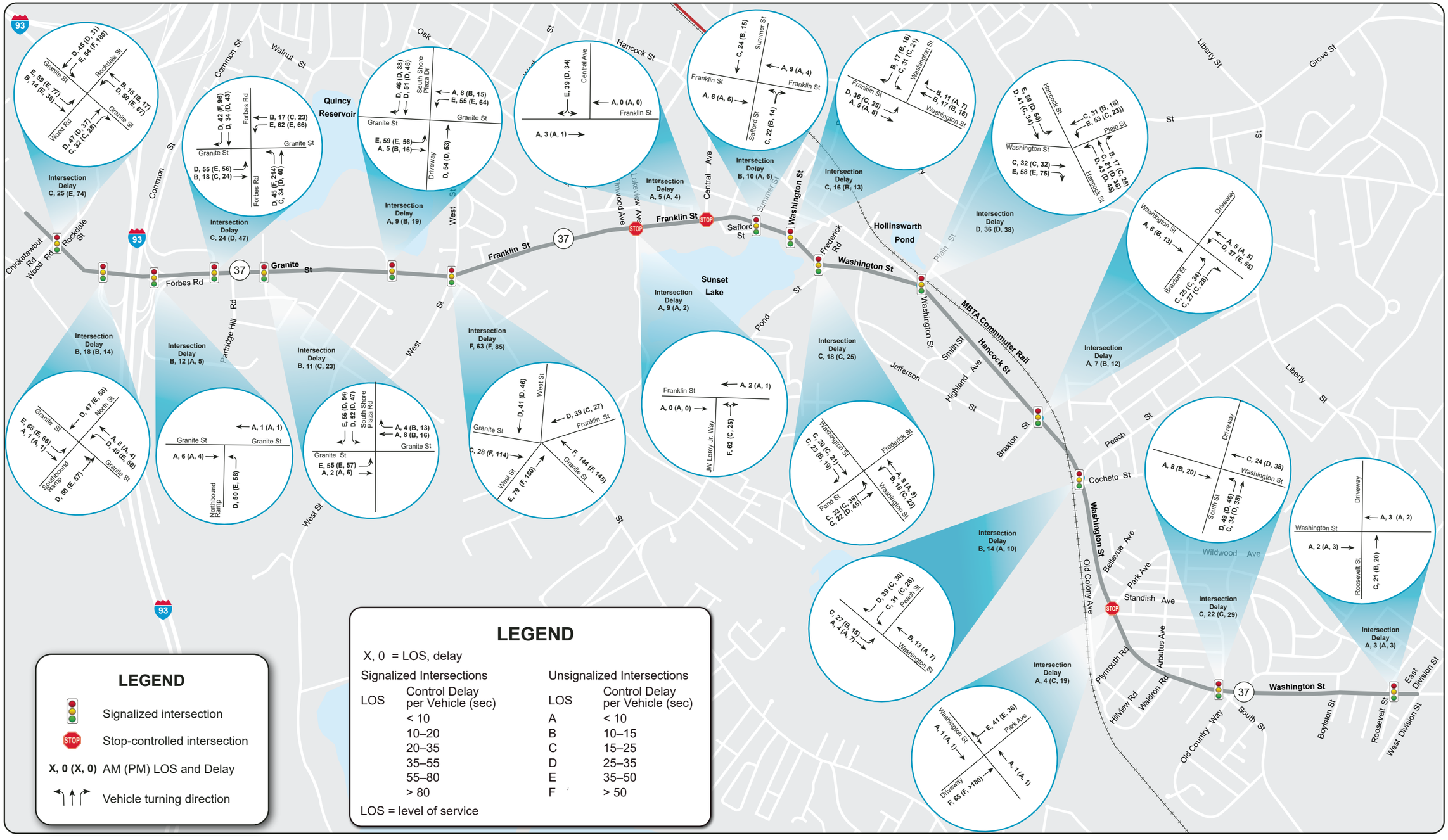
Route 37 Priority Corridor Study, Braintree, Massachusetts



BOSTON REGION MPO

Figure 27
2035 No-Build Conditions
Weekend Saturday Peak-Hour LOS and Delays

Route 37 Priority Corridor Study, Braintree, Massachusetts



LEGEND

- Signalized intersection
- Stop-controlled intersection
- **X, 0 (X, 0)** AM (PM) LOS and Delay
- Vehicle turning direction

LEGEND

X, 0 = LOS, delay

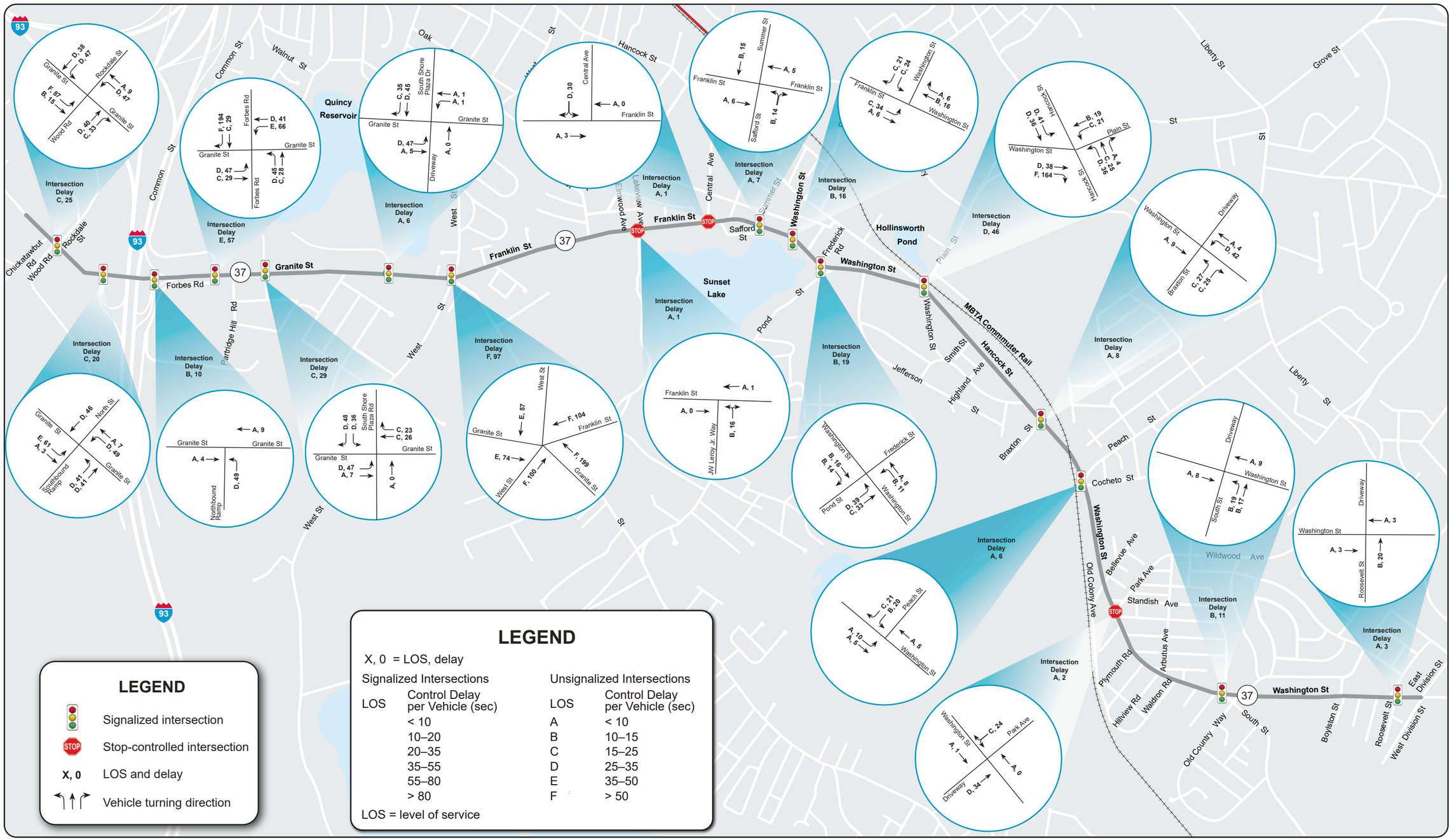
Signalized Intersections		Unsignalized Intersections	
LOS	Control Delay per Vehicle (sec)	LOS	Control Delay per Vehicle (sec)
	< 10	A	< 10
	10–20	B	10–15
	20–35	C	15–25
	35–55	D	25–35
	55–80	E	35–50
	> 80	F	> 50

LOS = level of service

BOSTON REGION MPO

Figure 28
2035 Build Conditions
Weekday Peak-Hours LOS and Delays

Route 37 Priority Corridor Study, Braintree, Massachusetts



BOSTON REGION MPO

Figure 29
2035 Build Conditions
Weekend Saturday Peak-Hour LOS and Delays

Route 37 Priority Corridor Study, Braintree, Massachusetts

4.4 FUTURE WALKING AND BIKING LOS

MPO staff evaluated what the future LOS for people walking and biking would be if the walking and biking infrastructure improvements from this study were implemented. Based on the assessment, all three segments of Route 37 were rated *good* in terms of meeting the MPO's goals for safety, capacity management and mobility, and system preservation, and *fair* for economic vitality because of the prioritization of safe accommodations for people who walk.

Route 37 was rated *excellent* in terms of meeting the MPO's goals for safety, capacity management and mobility, system preservation, and economic vitality for the Hancock/Washington Street segment because of the prioritization of safe accommodations for people who bike.

Route 37 Granite Street segment was rated excellent in terms of meeting MPO goals for safety, capacity management and mobility, and system preservation, and *satisfactory* for economic vitality because of the prioritization of safe accommodations for people who bike.

Route 37 Franklin Street segment was rated unacceptable for biking (same as existing conditions) because there was no space in the segment to install bike lanes. In this segment people biking would have to share the road with vehicles; staff proposed installing signs and pavement markings to increase awareness for people biking. Appendix B contains results of the LOS scorecard analyses.

4.5 SAFETY IMPACTS OF PROPOSED IMPROVEMENTS

Each proposed improvement was chosen to target specific safety and operational deficiencies in the study area. Safety improvements must reduce injury crashes and fatalities in the light of limited financial resources. So, it is helpful for stakeholders to understand how much a particular safety improvement, or set of safety improvements, can reduce crashes. A crash modification factor is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site.[5] These estimates have been developed by comparing crashes before implementation of a safety improvement against crashes after implementation. Table 13 presents some of the safety benefits of the proposed improvements.

[5] US Department of Transportation Federal Highway Administration, Crash Modification Factors Clearinghouse, April 2022, Crash Modification Factors Clearinghouse (cmfclearinghouse.org)

Table 13
Benefits of Proposed Improvements

Improvements	Safety Benefit	Reference
Install rectangular rapid flashing beacon	Up to 47 percent reduction in pedestrian crashes	(CMF ID: 9024) NCHRP Research Report 841 Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments, (2017).
Install pedestrian hybrid beacon	Up to 55 percent reduction in pedestrian crashes Up to 29 percent reduction in total crashes Up to 15 percent reduction in severe injury and fatal crashes	(CMF ID: 9020) Zegeer et al. NCHRP Report 841: Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments. TRB, (2017). (CMF ID: 2911, 2917) Fitzpatrick, K. and Park, E.S. Safety Effectiveness of the HAWK Pedestrian Crossing Treatment, FHWA-HRT-10-042, (2010)
Provide pedestrian countdown timers	Up to 9 percent reduction in all crashes	(CMF ID: 8790) Kigali, A. et al. "Developing Crash Modification Factors to Quantify Impacts of Pedestrian Countdown Signals to Drivers." Presented at the 96th Annual Meeting of the Transportation Research Board, Paper No. 17-05178, Washington, D.C., (2017
Install high-visibility crosswalk	Up to 40 percent reduction in pedestrian injuries	(CMF ID: 4123) Chen, L., C. Chen, and R. Ewing. The Relative Effectiveness of Pedestrian Safety Countermeasures at Urban Intersections - Lessons from a New York City Experience. (2012).
Improve highway lighting	Up to 28 percent reduction in nighttime injury crashes.	(CMF ID: 436) Elvik, R. and Vaa, T. Handbook of Road Safety Measures. Oxford, United Kingdom, Elsevier, (2004).
Improve intersection lighting	Up to 42 percent reduction in pedestrian crashes. Up to 38 percent reduction in nighttime crashes	(CMF ID: 436, 433, 192) Elvik, R. and Vaa, T. Handbook of Road Safety Measures. Oxford, United Kingdom, Elsevier, (2004) (CMF ID: 2376) Ye et al. A Simultaneous Equations Model of Crash Frequency by Collision Type for Rural Intersections, 87th Annual Meeting of the Transportation Research Board, (2008).
Install advance yield or stop marking.	Up to 25 percent reduction in pedestrian crashes	(CMF ID: 9017) Zeeger et al. Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments, FHWA, (2017).
Provide sidewalks	Up to 40 percent reduction in pedestrian crashes.	(CMF ID: 11246) Abou-Senna et al. Investigating the correlation between sidewalk and pedestrian safety, 2022.
Implement road diets	Between 19 percent and 47 percent reduction in total crashes	(CMF ID: 5554, 2841) Evaluation of Lane Reduction “Road Diet” Measures on Crashes, FHWA-HRT-10-053, (2010).
Provide roadway shoulders	Up to 71 percent reduction in crashes involving pedestrians walking along roadways.	Gan et al. Update of Florida Crash Reduction Factors and Countermeasures to Improve the Development of District Safety Improvement Projects. Florida DOT, (2005).

Improvements	Safety Benefit	Reference
Install leading pedestrian intervals	Up to 13 percent reduction in pedestrian-vehicle crashes at intersections.	(CMF ID: 9918) Goughnour, E. et al. "Safety Evaluation of Protected Left-Turn Phasing and Leading Pedestrian Intervals on Pedestrian Safety." Report No. FHWA-HRT-18-044. Federal Highway Administration. (October 2018)
Install bike lanes	Converting traditional or flush-buffered bicycle lanes to separated bicycle lanes with flexible delineator posts can reduce bicycle/vehicle crashes by up to 53 percent. Bicycle lane additions can reduce crashes by up to 49 percent on urban four-lane undivided collectors and local roads.	(CMF ID: 11296) Developing CMFs for Separated Bicycle Lanes. FHWA-HRT-23-025, (2023). (CMF ID: 10738, 10742) Development of Crash Modification Factors for Bicycle Lane Additions While Reducing Lane and Shoulder Widths. FHWA-HRT-21-012, (2021).
Add stop signs/stop lines	Up to 10 percent reduction in total crashes Up to 37 percent reduction in injury and fatal crashes	(CMF ID: 8867, 8870, 8874, 8893) T. Le et al. "Safety Effects of Low-Cost Systemic Safety Improvements at Signalized and Stop-Controlled Intersections," 96th Annual Meeting of the Transportation Research Board, Paper Number 17-05379, January 2017.
Modify clearance/ change times to ITE standards	Up to 50 percent reduction in red light running. Up to 14 percent reduction in all crashes	(CMF ID: 380, 384) NCHRP Report 731: Guidelines for Timing Yellow and All-Red Intervals at Signalized Intersections, (2011).
Add yellow retroreflective borders to signal heads	Up to 15 percent reduction in nighttime crashes	Sayed, T., Leur, P., and Pump, J., “Safety Impact of Increased Traffic Signal Backboards Conspicuity.” 2005 TRB 84th Annual Meeting: Compendium of Papers CD-ROM, Vol. TRB#05-16, Washington, D.C., (2005).
Conduct road safety audits	Between 10 percent to 60 percent reduction in crashes	Road Safety Audits: An Evaluation of RSA Programs and Projects, FHWA-SA-12-037; and FHWA Road Safety Audit Guidelines, FHWA-SA-06-06
Provide high-surface friction treatment	Up to 20 percent reduction in crashes at intersections Up to 48 percent reduction in crashes at horizontal curves	(CMF ID: 10342,10333) Merritt et al. Development of Crash Modification Factors for High Friction Surface Treatments. FHWA, (2020). (CMF ID: 2259) NCHRP Report 617: Accident Modification Factors for Traffic Engineering and ITS Improvements, (2008)
Provide dedicated turn lanes	28 percent to 48 percent reduction in crashes for the left turn lane 14 percent to 26 percent reduction in total crashes in the right turn lane	(CMF ID: 260, 268, 285, 289) Harwood et al. Safety Effectiveness of Intersection Left- and Right-Turn Lanes. FHWA-HRD-02-089, (2002). (CMF ID: 6096) Persaud et al. Safety Evaluation of Offset Improvements for Left-Turn Lanes. FHWA-HRT-09-035, (2009).

Improvements	Safety Benefit	Reference
Implement speed management	Appropriate Speed Limits for All Road Use	
Implement transit signal priority	Up to 12 percent reduction in all crashes	CMF ID: 11232) Ali, MD. S.et al. Quantifying the Safety Benefits of Transit Signal Priority Using Full Bayes Before–After Study. Journal of Transportation Engineers, Part A: Systems, Vol. 148 (1): 04021102, (2022).
Improve signal visibility	Up to 13 percent of all crashes	(CMF ID 1433) Sayed, T. et al. "Evaluating the Safety Impacts of Improving Signal Visibility at Urban Signalized Intersections." 2007 TRB 86th Annual Meeting: Compendium of Papers CD-ROM, Vol. TRB#07-135, Washington, D.C., (2007) (CMF ID 1411-13) El-Basyouny et al. "Investigating the Effect of Collision Aggregation on Safety Evaluations using Multivariate Linear Intervention Models: Case Study of Signal Head Upgrade Program." Presented at the Transportation Research Board 91st Annual Meeting, Paper No. 12-2093, January 22-26, 2012.

Notes:
CMF ID: 00000 = Each CMF has a unique identification number in the Clearinghouse. Using this search field means that only the CMF ID field will be searched. This will allow you to jump straight to a particular CMF if you know the ID number.
CMF = Crash Modification Factor. FHWA = Federal Highway Administration. HAWK = High-Intensity Activated Crosswalk Beacon (or Pedestrian Hybrid Beacon). ITE = Institute of Transportation Engineers. TRB = Transportation Research Board.

Chapter 5—Conclusion and Next Steps

The proposed improvements would significantly improve mobility in the Route 37 corridor by supporting walking, biking, and transit modes connecting employment centers, schools, and recreational areas. The walking and biking infrastructure improvements would be more beneficial if they were also connected to the proposed Complete Streets improvements on local roads, especially on side streets connecting to Route 37. Route 37 abuts and runs through several transportation equity neighborhoods in Braintree, and these improvements would increase the safety and mobility of those neighborhoods. Bus turnouts proposed in the new bike lanes and bus signal priority would improve safety and operations. Overall, the proposed improvements would increase safety for all users, give people more transportation choices, and promote smart growth.

The improvements developed in this study provide Massachusetts Department of Transportation (MassDOT), the Town of Braintree, and other stakeholders an opportunity to review options for addressing deficiencies in the corridor before committing design and engineering funds to a roadway improvement project. Project development is the process that takes transportation improvements from planning concept to construction. Successful implementation of the improvements would require cooperation among stakeholders. This study provides the necessary information for the project proponents to initiate the project notification and review process. MassDOT's Massachusetts Project Intake Tool (MaPIT) provides the platform to begin this process. After completing these initial steps, the proponents can start preliminary design and engineering and begin working with the Metropolitan Planning Organization to program funding for the projects in the Transportation Improvement Program. Appendix G contains an overview of the project development process.

APPENDICES

Appendix A

Advisory Task Force and Comments

1: Advisory Task Force

2: Review Comments

Part 1: Advisory Task Force

Route 37 Priority Corridor Study

Advisory Committee Members

Name	Email	Affiliation
Raj Kulen	Raj.Kulen@state.ma.us	MassDOT Highway District 6
Ben Muller	benjamin.muller@state.ma.us	MassDOT Highway District 6
Erin Kinahan	Erin.kinahan@state.ma.us	MassDOT Highway District 6
Mark Abbott	mark.s.abbott@state.ma.us	MassDOT Highway District 6
Anna Fabian	anna.m.fabian@dot.state.ma.us	MassDOT
Julie Dombroski	julie.l.dombroski@dot.state.ma.us	MassDOT Highway District 6
Jonathan Stratter	jonathan.p.stratter@dot.state.ma.us	MassDOT
Julia C. Ubertini	julia.c.ubertini@dot.state.ma.us	MassDOT
Patrick Snyder	patrick.l.snyder@state.ma.us	MassDOT Planning
Derek Krevat	derek.krevat@state.ma.us	MassDOT Planning
Joseph Doucette	joseph.k.doucette@state.ma.us	MassDOT Planning
James Arsenault	jarsenault@braintreema.gov	Town of Braintree
John Thompson	jthompson@braintreema.gov	Town of Braintree
Melissa SantucciRozzi	msantucci@braintreema.gov	Town of Braintree
James O'Brien	jfobrien@braintreema.gov	Town of Braintree
Robert Millette	rmillette@braintreema.gov	Town of Braintree
Robert Guptill	rguptill@mbta.com	MBTA
Jay Jackson	jayjackson@mbta.com	MBTA
Linda A. Lally	llally@mbta.com	MBTA
Jill Donovan	jdonovan@southshorechamber.org	South Shore Chamber of Commerce
Courtney Bjorgaard	cbjorgaard@southshorechamber.org	South Shore Chamber of Commerce
Christopher Scully	christopher.scully@braintreeschools.org	Braintree High School
Kate Naughton	knaughton@braintreema.gov	Town of Braintree
Kara Nyman	knyman@braintreema.gov	Town of Braintree
Tim Cohoon	tcohoon@braintreema.gov	Town of Braintree
Nancy Moynihan	nancy.moynihan@braintreeschools.org	Braintree Schools
Matthew Riordan	matthew.riordan@braintreeschools.org	Braintree Schools

Part 2: Review Comments

MassDOT Highway District 6 Comments

1. Pedestrian safety improvements at the approach of Chickatawbut Road are the responsibilities of the Department of Conservation and Recreation.
2. Specify the locations to install crosswalks where sidewalks end and continue on the other side of the roadway.
3. What are the issues for installing "Do NOT Block Intersection" pavement markings proposal at the intersection of Washington Street and Pond Street? Is wide intersection, or queuing issues? There aren't many crashes which leads me to believe that people sitting in the intersection is the issue.
4. Table 8, change Park Street to Park Avenue
5. A speed study would have to be conducted in order to set target speed regulations consistent with the corridor context and land use.
6. MassDOT Complete Streets require a crosswalk on all approaches to signalized intersections. If that is not possible then a Design Justification Workbook is necessary.

Re: Route 37 Priority Study Corridor Study Report

1 message

Snyder, Patrick L. (DOT) <Patrick.L.Snyder@dot.state.ma.us> Mon, Jun 24, 2024 at 11:11 AM

To: Seth Asante <sasante@ctps.org>

Hi Seth,

One thing I noticed - I was wondering if it makes sense to include suggested bike lanes on the Granite Street Segment and Hancock Street at Washington and Plain Streets. At a high level it looks like it might be possible (with curb space, and traffic volumes that might be able to tolerate a road sure), but perhaps your team evaluated this and it's not feasible at this time (although perhaps long term?).

Thanks for the reminder. Nothing further.

Kind regards,

Patrick

Patrick L. Snyder (he/him)
Multimodal Planning | Office of Transportation Planning | MassDOT
10 Park Plaza, Suite 4150, Boston, MA 02116
Email: patrick.l.snyder@dot.state.ma.us | Cell: +1 (857) 301-0804

Appendix B

Pedestrian and Bicycle Report Cards

1: Pedestrian Report Card Assessment

2: Bicycle Report Card Assessment

Part 1: Pedestrian Report Card Assessment

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Granite Street): Existing Conditions

Grading Categories[1]	Score	Rating
Safety	1.0	Poor
System Preservation	1.0	Poor
Capacity Management and Mobility	1.8	Fair
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	1.0	Poor
Crosswalk Presence	33%	3.0	Good
Walkway Width	17%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**1.8**	**Fair**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2.0	Fair
Adjacent Bicycle Accommodations	50%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	1.0	Poor
Pedestrian-Vehicle Buffer	20%	0	Poor
Vehicle Travel Speed	20%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**1.0**	**Poor**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Large gaps in sidewalk network(1)
	Crosswalk Presence	Seven crosswalk per mile (3)
	Walkway Width	Sidewalks measuring at least five feet wide on at least one side of the road (2)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segments with between 5 and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with two pedestrian crashes (1)
	Pedestrian-Vehicle Buffer	Roadway segments without buffer (0)
	Vehicle Travel Speed	Roadway segments where average speeds between 25 and 35 mph (2)
System Preservation	Sidewalk Condition	Roadway segments with less than half of sidewalks in good condition (1)

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

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www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Franklin Street): Existing Conditions

Grading Categories[1]	Score	Rating
Safety	2.2	Fair
System Preservation	1.0	Poor
Capacity Management and Mobility	2.2	Fair
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	3.0	Good
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**2.2**	**Fair**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2	Fair
Adjacent Bicycle Accommodations	50%	2	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	3	Good
Pedestrian-Vehicle Buffer	20%	1	Poor
Vehicle Travel Speed	20%	1	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**2.2**	**Fair**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Large gaps in sidewalk network (2)
	Crosswalk Presence	Less than seven crosswalk per mile (1)
	Walkway Width	Sidewalks measuring at least five feet wide on at least one side of the road (3)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segments with between 5 and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with no pedestrian crashes (2)
	Pedestrian-Vehicle Buffer	Roadway segments without buffer (1)
	Vehicle Travel Speed	Roadway segments where average speeds of 35 mph (1)
System Preservation	Sidewalk Condition	Roadway segments with less than half of sidewalks in good condition (1)

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Washington Street): Existing Conditions

Grading Categories[1]	Score	Rating
Safety	1.6	Poor
System Preservation	1.0	Poor
Capacity Management and Mobility	1.8	Fair
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	2.0	Fair
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	3.0	Good
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**1.8**	**Fair**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2.0	Fair
Adjacent Bicycle Accommodations	50%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	2.0	Good
Pedestrian-Vehicle Buffer	20%	1.0	Poor
Vehicle Travel Speed	20%	1.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**1.6**	**Poor**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Large gaps in sidewalk network (2)
	Crosswalk Presence	Less than 7 crosswalk per mile (1)
	Walkway Width	Sidewalks measuring at least five feet wide on at least one side of the road (3)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segments with between 5 and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with no pedestrian crashes (3)
	Pedestrian-Vehicle Buffer	Roadway segments without buffer (1)
	Vehicle Travel Speed	Roadway segments where average speeds between 25 and 35 mph (2)
System Preservation	Sidewalk Condition	Roadway segments with less than half of sidewalks in good condition (1)

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www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Granite Street): With Improvements

Grading Categories[1]	Score	Rating
Safety	2.2	Fair
System Preservation	3.0	Good
Capacity Management and Mobility	2.5	Good
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	2.0	Good
Crosswalk Presence	33%	3.0	Good
Walkway Width	17%	3.0	Good
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**2.5**	**Good**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2.0	Fair
Adjacent Bicycle Accommodations	50%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	3.0	Good
Pedestrian-Vehicle Buffer	20%	0	Poor
Vehicle Travel Speed	20%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**2.2**	**Fair**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	3.0	Good

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Continuous sidewalk network (3)
	Crosswalk Presence	Seven crosswalk per mile (3)
	Walkway Width	Sidewalks measuring at least five feet wide on both sides of the road (3)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segments with between five and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with no pedestrian crashes (3)
	Pedestrian-Vehicle Buffer	Roadway segments without buffer (0)
	Vehicle Travel Speed	Roadway segments where average speeds between 25 and 35 mph (2)
System Preservation	Sidewalk Condition	Roadway segments with sidewalks in good condition (3)

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www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Franklin Street): With Improvements

Grading Categories[1]	Score	Rating
Safety	2.4	Good
System Preservation	3.0	Good
Capacity Management and Mobility	2.3	Good
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	3.0	Good
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	3.0	Good
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**2.3**	**Good**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2.0	Fair
Adjacent Bicycle Accommodations	50%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	3.0	Good
Pedestrian-Vehicle Buffer	20%	1.0	Poor
Vehicle Travel Speed	20%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**2.4**	**Good**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	3.0	Good

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	No gap in sidewalk network(3)
	Crosswalk Presence	Less than seven crosswalk per mile (1)
	Walkway Width	Sidewalks measuring at least five feet wide on both sides of the road (3)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segment with between 5 and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with no pedestrian crashes (3)
	Pedestrian-Vehicle Buffer	Roadway segment without buffer (1)
	Vehicle Travel Speed	Roadway segment where average speeds between 25 and 35 mph (2)
System Preservation	Sidewalk Condition	Roadway segment with sidewalks in good condition (3)

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www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Pedestrian Report Card Assessment (PRCA):
Roadway Segment

Roadway Segment Location
Route 37 (Washington Street): With Improvements

Grading Categories[1]	Score	Rating
Safety	2.6	Good
System Preservation	3.0	Good
Capacity Management and Mobility	2.3	Good
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	3.0	Good
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	3.0	Good
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**2.3**	**Good**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2.0	Fair
Adjacent Bicycle Accommodations	50%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0
[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	3.0	Good
Pedestrian-Vehicle Buffer	20%	2.0	Fair
Vehicle Travel Speed	20%	2.0	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**2.6**	**Good**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	130	Good

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	No
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Small gap in sidewalk network (3)
	Crosswalk Presence	Less than 7 crosswalk per mile (1)
	Walkway Width	Sidewalks measuring at least five feet wide on both sides of the road (3)
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour (2)
	Adjacent Bicycle Accommodations	Roadway segment with between 5 and 60 bicycles per hour (2)
Safety	Pedestrian Crashes	Roadway segment with no pedestrian crashes (3)
	Pedestrian-Vehicle Buffer	Roadway segment with buffer (2)
	Vehicle Travel Speed	Roadway segment where average speeds between 25 and 35 mph (2)
System Preservation	Sidewalk Condition	Roadway segment with sidewalks in good condition (3)

Part 2: Bicycle Report Card Assessment

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Granite Street) : Existing Conditions

Grading Categories	Score	Grade
Safety	29	F
System Preservation	0	F
Capacity Management and Mobility	50	F
Economic Vitality	50	F

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	0	F
Proximity to Bike Network	33%	100	F
Proximity to Transit	17%	100	A
Total	**100%**	**50**	**F**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	**100%**	**50**	**F**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	0	F
Absence of Bicycle Crashes	33%	50	F
Bicyclist Operating Space	17%	0	C
Number of Travel Lanes	17%	75	C
Total	**100%**	**29**	**F**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	0	F
Bicycle Facility Condition	50%	0	F
Total	**100%**	**0**	**F**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Proximity to Bike Network	Yes, bicycle facility within one-quarter mile on West Street, which connects to Granite Street (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	None in the corridor (0)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Absence of Bicycle Crashes	Two bicycle crashes in five years (2016–20) (50%)
	Bicyclist Operating Space	People biking share lane with vehicles (0)
	Number of Travel Lanes	Two travel lanes each direction (75)
System Preservation	Bicycle Facility Continuity	No bicycle facility (0)
	Bicycle Facility Condition	No bicycle facility (0)

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www.ctps.org | 857.702.3700 | ctps@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Franklin Street) : Existing Conditions

Grading Categories	Score	Grade
Safety	40	F
System Preservation	0	F
Capacity Management and Mobility	50	F
Economic Vitality	50	F

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	0	F
Proximity to Bike Network	33%	100	F
Proximity to Transit	17%	100	A
Total	**100%**	**50**	**F**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	**100%**	**50**	**F**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	0	F
Absence of Bicycle Crashes	33%	70	F
Bicyclist Operating Space	17%	0	C
Number of Travel Lanes	17%	100	C
Total	**100%**	**40**	**F**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	0	F
Bicycle Facility Condition	50%	0	F
Total	**100%**	**0**	**F**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Proximity to Bike Network	Yes, bicycle facility within one-quarter mile on Hancock Street and West Street, which connects to Franklin Street (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	None in the corridor (0)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Absence of Bicycle Crashes	One bicycle crash in five years (2016–20) (70)
	Bicyclist Operating Space	People biking share lane with vehicles (0)
	Number of Travel Lanes	One travel lane each direction (100)
System Preservation	Bicycle Facility Continuity	No bicycle facility (0)
	Bicycle Facility Condition	No bicycle facility (0)

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www.ctps.org | 857.702.3700 | ctps@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Washington Street) : Existing Conditions

Grading Categories	Score	Grade
Safety	55	F
System Preservation	50	F
Capacity Management and Mobility	85	B
Economic Vitality	50	F

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	70	C
Proximity to Bike Network	33%	100	A
Proximity to Transit	17%	100	A
Total	**100%**	**85**	**B**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	**100%**	**50**	**F**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	75	C
Absence of Bicycle Crashes	33%	0	F
Bicyclist Operating Space	17%	80	B
Number of Travel Lanes	17%	100	A
Total	**100%**	**55**	**F**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	50	F
Bicycle Facility Condition	50%	50	F
Total	**100%**	**50**	**F**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	Yes, bike facility present in the corridor on Washington Street and shoulders in areas where there are no bike facilities. (70)
	Proximity to Bike Network	Yes, bicycle facility within the corridor south of South Street (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	None in the corridor (0)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	Yes, bike facility present in the corridor on Washington Street and shoulders in areas where there are no bike facilities (70)
	Absence of Bicycle Crashes	One bicycle crash in five years (2016–20) (70)
	Bicyclist Operating Space	Bicycle facility measures five feet wide for each direction of travel (70)
	Number of Travel Lanes	One travel lane each direction (100)
System Preservation	Bicycle Facility Continuity	Bicycle facility present on one-half of the corridor (50)
	Bicycle Facility Condition	Bicycle facility is new and in good condition (100)

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Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Granite Street) : With Improvements

Grading Categories	Score	Grade
Safety	96	A
System Preservation	100	A
Capacity Management and Mobility	500	A
Economic Vitality	88	B

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	100	A
Proximity to Bike Network	33%	100	A
Proximity to Transit	17%	100	A
Total	**100%**	**100**	**A**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	75	C
Land Use	50%	100	A
Total	**100%**	**88**	**B**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	100	A
Absence of Bicycle Crashes	33%	100	A
Bicyclist Operating Space	17%	100	A
Number of Travel Lanes	17%	75	C
Total	**100%**	**96**	**A**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	100	A
Bicycle Facility Condition	50%	100	A
Total	**100%**	**100**	**A**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	Proposed bike infrastructure in the corridor (100)
	Proximity to Bike Network	Yes, bicycle facility within one-quarter mile on West Street, which connects to Granite Street (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	In the mall and businesses along the corridor (75)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	Proposed bike infrastructure in the corridor (100)
	Absence of Bicycle Crashes	No bicycle crashes in five years (100%)
	Bicyclist Operating Space	People biking protected biking facilities (100)
	Number of Travel Lanes	Two travel lanes each direction (75)
System Preservation	Bicycle Facility Continuity	Length of bicycle facility match length of corridor (100)
	Bicycle Facility Condition	Segment include bicycle facility (100)

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Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Franklin Street) : With Improvements

Grading Categories	Score	Grade
Safety	40	F
System Preservation	0	F
Capacity Management and Mobility	50	F
Economic Vitality	50	F

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	0	F
Proximity to Bike Network	33%	100	A
Proximity to Transit	17%	100	A
Total	**100%**	**50**	**F**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	**100%**	**50**	**F**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	0	F
Absence of Bicycle Crashes	33%	70	C
Bicyclist Operating Space	17%	70	C
Number of Travel Lanes	17%	100	A
Total	**100%**	**51**	**F**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	0	F
Bicycle Facility Condition	50%	0	F
Total	**100%**	**0**	**F**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Proximity to Bike Network	Yes, bicycle facility within one-quarter mile on Hancock Street and West Street, which connects to Franklin Street (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	None in the corridor (0)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	None in the corridor on Granite Street, people biking mostly share the road (0)
	Absence of Bicycle Crashes	No bicycle crash in five years (100)
	Bicyclist Operating Space	People biking share lane with vehicles (70)
	Number of Travel Lanes	One travel lane each direction (100)
System Preservation	Bicycle Facility Continuity	No bicycle facility (0)
	Bicycle Facility Condition	No bicycle facility (0)

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Appendix B
Bicycle Report Card

Roadway Segment Location
Route 37 (Washington Street) With Improvements

Grading Categories	Score	Grade
Safety	98	A
System Preservation	100	A
Capacity Management and Mobility	100	A
Economic Vitality	95	A

Transportation Equity	
High Priority Area	
Moderate Priority Area	Yes
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility			
Performance Measure	**Percentage**	**Points**	**Grade**
Bicycle Facility Presence	50%	100	A
Proximity to Bike Network	33%	100	A
Proximity to Transit	17%	100	A
Total	**100%**	**100**	**A**

Economic Vitality			
Performance Measure	**Percentage**	**Points**	**Grade**
Bike Rack Presence	50%	90	A
Land Use	50%	100	A
Total	**100%**	**95**	**A**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety			
Performance Measure	**Percentage**	**Points**	**Grade**
Bicycle Facility Presence	33%	100	A
Absence of Bicycle Crashes	33%	100	A
Bicyclist Operating Space	17%	90	A
Number of Travel Lanes	17%	100	A
Total	**100%**	**98**	**A**

System Preservation			
Performance Measure	**Percentage**	**Points**	**Grade**
Bicycle Facility Continuity	50%	100	A
Bicycle Facility Condition	50%	100	A
Total	**100%**	**100**	**A**

Transportation Equity Priority	
Area Condition	**Yes/No**
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	No
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	No
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	Yes, bike facility present in the corridor on Washington Street. (100)
	Proximity to Bike Network	Yes, bicycle facility within the corridor (100)
	Proximity to Transit	Yes, bus route 230, 236, and 238 operates on the corridor (100)
Economic Vitality	Bike Rack Presence	None in the corridor (0)
	Land Use	Land uses in the corridor, include commercial and retail, residential, and recreational, would support biking (100)
Safety	Bicycle Facility Presence	Yes, bike facility present in the corridor on Washington Street and shoulders in areas where there are no bike facilities (100)
	Absence of Bicycle Crashes	No bicycle crash in five years (100)
	Bicyclist Operating Space	Bicycle facility measures five feet wide for each direction of travel (100)
	Number of Travel Lanes	One travel lane each direction (100)
System Preservation	Bicycle Facility Continuity	Bicycle facility present entire the corridor (100)
	Bicycle Facility Condition	Bicycle facility is new and in good condition (100)

Appendix C

Traffic and Signal Timing Data

1: Turning Movement Counts

2: Automatic Traffic Recorder Counts

3: Speed Data

4: Signal Timing Data

Part 1: Turning Movement Counts

239319 (1) Granite @ Wood TMC - TMC

Thu May 4, 2023
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065000, Location: 42.226091, -71.031899

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Rockdale Street						Granite Street (Route 37)						Wood Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	9	36	4	0	**49**	0	2	1	1	0	**4**	0	7	72	20	3	**102**	0	10	0	12	0	**22**	0	**177**
6:15AM	19	43	1	0	**63**	0	2	0	4	0	**6**	0	9	78	25	1	**113**	0	9	0	6	0	**15**	0	**197**
6:30AM	14	64	2	0	**80**	0	1	0	7	0	**8**	0	12	113	34	0	**159**	0	17	0	7	0	**24**	0	**271**
6:45AM	16	61	4	0	**81**	0	0	1	2	0	**3**	0	28	138	49	2	**217**	0	14	0	7	0	**21**	0	**322**
Hourly Total	58	204	11	0	**273**	0	5	2	14	0	**21**	0	56	401	128	6	**591**	0	50	0	32	0	**82**	0	**967**
7:00AM	15	65	7	0	**87**	0	5	1	9	1	**16**	0	28	142	37	1	**208**	0	22	0	9	0	**31**	0	**342**
7:15AM	14	77	7	1	**99**	0	3	1	3	0	**7**	0	33	217	49	0	**299**	0	22	0	16	0	**38**	0	**443**
7:30AM	14	115	9	0	**138**	0	1	0	6	1	**8**	0	26	264	55	1	**346**	0	21	1	18	0	**40**	0	**532**
7:45AM	25	128	15	0	**168**	0	4	1	7	0	**12**	0	48	245	81	0	**374**	0	27	1	10	0	**38**	0	**592**
Hourly Total	68	385	38	1	**492**	0	13	3	25	2	**43**	0	135	868	222	2	**1227**	0	92	2	53	0	**147**	0	**1909**
8:00AM	26	125	32	0	**183**	0	5	1	16	0	**22**	0	65	206	94	0	**365**	0	13	1	5	0	**19**	0	**589**
8:15AM	33	138	34	0	**205**	0	7	4	12	0	**23**	0	79	222	87	0	**388**	1	28	1	15	0	**44**	0	**660**
8:30AM	42	130	18	2	**192**	0	8	2	16	0	**26**	0	94	218	109	0	**421**	0	23	0	12	0	**35**	0	**674**
8:45AM	33	111	34	0	**178**	0	5	1	11	0	**17**	0	115	174	91	0	**380**	0	31	5	9	0	**45**	0	**620**
Hourly Total	134	504	118	2	**758**	0	25	8	55	0	**88**	0	353	820	381	0	**1554**	1	95	7	41	0	**143**	0	**2543**
3:00PM	27	245	12	0	**284**	1	15	6	34	0	**55**	0	19	130	59	1	**209**	0	54	0	27	0	**81**	0	**629**
3:15PM	26	279	15	0	**320**	0	7	3	34	0	**44**	0	17	97	52	8	**174**	0	58	1	14	0	**73**	0	**611**
3:30PM	23	252	11	0	**286**	0	13	5	46	0	**64**	0	12	101	60	1	**174**	1	63	1	22	0	**86**	0	**610**
3:45PM	29	280	8	0	**317**	0	15	1	43	0	**59**	0	15	110	57	1	**183**	0	41	0	17	0	**58**	0	**617**
Hourly Total	105	1056	46	0	**1207**	1	50	15	157	0	**222**	0	63	438	228	11	**740**	1	216	2	80	0	**298**	0	**2467**
4:00PM	22	276	12	2	**312**	0	19	4	56	0	**79**	0	21	87	62	1	**171**	1	60	0	20	0	**80**	0	**642**
4:15PM	30	276	8	0	**314**	0	16	5	29	0	**50**	0	16	96	44	1	**157**	0	66	0	14	0	**80**	0	**601**
4:30PM	26	306	9	0	**341**	0	15	4	63	0	**82**	0	16	112	50	2	**180**	0	73	2	21	0	**96**	0	**699**
4:45PM	25	286	11	0	**322**	0	16	3	68	0	**87**	0	14	108	53	2	**177**	0	62	1	18	0	**81**	0	**667**
Hourly Total	103	1144	40	2	**1289**	0	66	16	216	0	**298**	0	67	403	209	6	**685**	1	261	3	73	0	**337**	0	**2609**
5:00PM	22	199	13	0	**234**	0	23	7	99	0	**129**	0	24	95	53	7	**179**	0	91	3	20	0	**114**	0	**656**
5:15PM	40	259	7	1	**307**	0	21	3	56	0	**80**	0	21	116	60	0	**197**	0	54	4	13	0	**71**	0	**655**
5:30PM	27	271	12	0	**310**	0	25	2	68	0	**95**	0	17	122	47	0	**186**	0	37	0	17	0	**54**	0	**645**
5:45PM	21	298	6	0	**325**	0	20	0	41	0	**61**	0	14	98	52	0	**164**	0	47	1	17	0	**65**	0	**615**
Hourly Total	110	1027	38	1	**1176**	0	89	12	264	0	**365**	0	76	431	212	7	**726**	0	229	8	67	0	**304**	0	**2571**
2023-05-06 11:00AM	24	182	10	2	**218**	0	5	1	21	0	**27**	0	9	83	48	1	**141**	0	67	0	21	0	**88**	1	**474**
11:15AM	25	178	4	0	**207**	0	2	0	8	0	**10**	0	12	64	46	7	**129**	0	60	0	16	0	**76**	0	**422**
11:30AM	23	147	7	0	**177**	0	4	1	8	0	**13**	0	11	88	59	3	**161**	0	50	0	18	0	**68**	1	**419**
11:45AM	17	187	8	0	**212**	0	6	0	12	0	**18**	0	14	98	72	7	**191**	0	58	0	17	0	**75**	1	**496**
Hourly Total	89	694	29	2	**814**	0	17	2	49	0	**68**	0	46	333	225	18	**622**	0	235	0	72	0	**307**	3	**1811**
12:00PM	14	149	9	0	**172**	0	4	1	17	0	**22**	0	10	83	53	0	**146**	0	63	1	22	1	**87**	0	**427**
12:15PM	20	206	5	0	**231**	0	6	0	17	0	**23**	1	15	99	67	0	**181**	1	52	0	10	0	**62**	1	**497**
12:30PM	20	172	8	1	**201**	0	4	0	15	0	**19**	0	15	88	63	0	**166**	0	46	0	19	0	**65**	0	**451**
12:45PM	30	176	3	0	**209**	0	8	1	17	0	**26**	5	12	74	55	1	**142**	0	48	0	16	0	**64**	0	**441**
Hourly Total	84	703	25	1	**813**	0	22	2	66	0	**90**	6	52	344	238	1	**635**	1	209	1	67	1	**278**	1	**1816**
1:00PM	18	199	8	0	**225**	0	5	2	16	0	**23**	0	10	94	76	3	**183**	0	47	2	13	0	**62**	0	**493**
1:15PM	16	169	12	0	**197**	0	3	2	17	0	**22**	3	15	93	75	1	**184**	2	52	0	9	0	**61**	0	**464**
1:30PM	21	205	5	0	**231**	0	12	0	16	0	**28**	0	12	93	55	4	**164**	1	44	3	11	0	**58**	0	**481**
1:45PM	22	224	3	0	**249**	0	8	0	17	0	**25**	0	11	91	65	5	**172**	1	44	1	20	0	**65**	0	**511**
Hourly Total	77	797	28	0	**902**	0	28	4	66	0	**98**	3	48	371	271	13	**703**	4	187	6	53	0	**246**	0	**1949**
Total	828	6514	373	9	**7724**	1	315	64	912	2	**1293**	9	896	4409	2114	64	**7483**	8	1574	29	538	1	**2142**	4	**18642**
% Approach	10.7%	84.3%	4.8%	0.1%	**-**	-	24.4%	4.9%	70.5%	0.2%	**-**	-	12.0%	58.9%	28.3%	0.9%	**-**	-	73.5%	1.4%	25.1%	0%	**-**	-	-
% Total	4.4%	34.9%	2.0%	0%	**41.4%**	-	1.7%	0.3%	4.9%	0%	**6.9%**	-	4.8%	23.7%	11.3%	0.3%	**40.1%**	-	8.4%	0.2%	2.9%	0%	**11.5%**	-	-
Motorcycles	1	14	0	0	**15**	-	0	0	3	0	**3**	-	3	6	5	0	**14**	-	1	0	1	0	**2**	-	34
% Motorcycles	0.1%	0.2%	0%	0%	**0.2%**	-	0%	0%	0.3%	0%	**0.2%**	-	0.3%	0.1%	0.2%	0%	**0.2%**	-	0.1%	0%	0.2%	0%	**0.1%**	-	0.2%
Lights	809	6336	370	9	**7524**	-	310	61	898	2	**1271**	-	881	4261	2022	63	**7227**	-	1502	26	525	1	**2054**	-	18076
% Lights	97.7%	97.3%	99.2%	100%	**97.4%**	-	98.4%	95.3%	98.5%	100%	**98.3%**	-	98.3%	96.6%	95.6%	98.4%	**96.6%**	-	95.4%	89.7%	97.6%	100%	**95.9%**	-	97.0%
Single-Unit Trucks	15	88	1	0	**104**	-	2	2	7	0	**11**	-	7	84	60	0	**151**	-	49	2	7	0	**58**	-	324
% Single-Unit Trucks	1.8%	1.4%	0.3%	0%	**1.3%**	-	0.6%	3.1%	0.8%	0%	**0.9%**	-	0.8%	1.9%	2.8%	0%	**2.0%**	-	3.1%	6.9%	1.3%	0%	**2.7%**	-	1.7%
Articulated Trucks	3	18	1	0	**22**	-	0	0	2	0	**2**	-	2	21	24	0	**47**	-	17	0	3	0	**20**	-	91
% Articulated Trucks	0.4%	0.3%	0.3%	0%	**0.3%**	-	0%	0%	0.2%	0%	**0.2%**	-	0.2%	0.5%	1.1%	0%	**0.6%**	-	1.1%	0%	0.6%	0%	**0.9%**	-	0.5%
Buses	0	57	1	0	**58**	-	2	1	2	0	**5**	-	2	36	3	1	**42**	-	5	0	1	0	**6**	-	111
% Buses	0%	0.9%	0.3%	0%	**0.8%**	-	0.6%	1.6%	0.2%	0%	**0.4%**	-	0.2%	0.8%	0.1%	1.6%	**0.6%**	-	0.3%	0%	0.2%	0%	**0.3%**	-	0.6%
Bicycles on Road	0	1	0	0	**1**	-	1	0	0	0	**1**	-	1	1	0	0	**2**	-	0	1	1	0	**2**	-	6
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0.3%	0%	0%	0%	**0.1%**	-	0.1%	0%	0%	0%	**0%**	-	0%	3.4%	0.2%	0%	**0.1%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	8	-	-	-	-	-	6	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	88.9%	-	-	-	-	-	75.0%	-	-	-	-	-	50.0%	-

Leg	Granite Street (Route 37)						Rockdale Street						Granite Street (Route 37)						Wood Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	11.1%	-	-	-	-	-	25.0%	-	-	-	-	-	50.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (1) Granite @ Wood TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 8AM - 9 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065000, Location: 42.226091, -71.031899

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Rockdale Street						Granite Street (Route 37)						Wood Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 8:00AM	26	125	32	0	**183**	0	5	1	16	0	**22**	0	65	206	94	0	**365**	0	13	1	5	0	**19**	0	**589**
8:15AM	33	138	34	0	**205**	0	7	4	12	0	**23**	0	79	222	87	0	**388**	1	28	1	15	0	**44**	0	**660**
8:30AM	42	130	18	2	**192**	0	8	2	16	0	**26**	0	94	218	109	0	**421**	0	23	0	12	0	**35**	0	**674**
8:45AM	33	111	34	0	**178**	0	5	1	11	0	**17**	0	115	174	91	0	**380**	0	31	5	9	0	**45**	0	**620**
Total	134	504	118	2	**758**	0	25	8	55	0	**88**	0	353	820	381	0	**1554**	1	95	7	41	0	**143**	0	**2543**
% Approach	17.7%	66.5%	15.6%	0.3%	**-**	-	28.4%	9.1%	62.5%	0%	**-**	-	22.7%	52.8%	24.5%	0%	**-**	-	66.4%	4.9%	28.7%	0%	**-**	-	-
% Total	5.3%	19.8%	4.6%	0.1%	**29.8%**	-	1.0%	0.3%	2.2%	0%	**3.5%**	-	13.9%	32.2%	15.0%	0%	**61.1%**	-	3.7%	0.3%	1.6%	0%	**5.6%**	-	-
PHF	0.798	0.913	0.868	0.250	**0.924**	-	0.781	0.500	0.859	-	**0.846**	-	0.767	0.923	0.874	-	**0.923**	-	0.766	0.350	0.683	-	**0.794**	-	0.943
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	1
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.3%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	130	478	117	2	**727**	-	25	8	51	0	**84**	-	347	793	354	0	**1494**	-	78	6	38	0	**122**	-	2427
% Lights	97.0%	94.8%	99.2%	100%	**95.9%**	-	100%	100%	92.7%	0%	**95.5%**	-	98.3%	96.7%	92.9%	0%	**96.1%**	-	82.1%	85.7%	92.7%	0%	**85.3%**	-	95.4%
Single-Unit Trucks	3	9	0	0	**12**	-	0	0	2	0	**2**	-	3	22	23	0	**48**	-	9	1	3	0	**13**	-	75
% Single-Unit Trucks	2.2%	1.8%	0%	0%	**1.6%**	-	0%	0%	3.6%	0%	**2.3%**	-	0.8%	2.7%	6.0%	0%	**3.1%**	-	9.5%	14.3%	7.3%	0%	**9.1%**	-	2.9%
Articulated Trucks	1	2	1	0	**4**	-	0	0	1	0	**1**	-	1	3	3	0	**7**	-	5	0	0	0	**5**	-	17
% Articulated Trucks	0.7%	0.4%	0.8%	0%	**0.5%**	-	0%	0%	1.8%	0%	**1.1%**	-	0.3%	0.4%	0.8%	0%	**0.5%**	-	5.3%	0%	0%	0%	**3.5%**	-	0.7%
Buses	0	15	0	0	**15**	-	0	0	1	0	**1**	-	1	2	1	0	**4**	-	3	0	0	0	**3**	-	23
% Buses	0%	3.0%	0%	0%	**2.0%**	-	0%	0%	1.8%	0%	**1.1%**	-	0.3%	0.2%	0.3%	0%	**0.3%**	-	3.2%	0%	0%	0%	**2.1%**	-	0.9%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (1) Granite @ Wood TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065000, Location: 42.226091, -71.031899

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Rockdale Street						Granite Street (Route 37)						Wood Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	26	306	9	0	**341**	0	15	4	63	0	**82**	0	16	112	50	2	**180**	0	73	2	21	0	**96**	0	**699**
4:45PM	25	286	11	0	**322**	0	16	3	68	0	**87**	0	14	108	53	2	**177**	0	62	1	18	0	**81**	0	**667**
5:00PM	22	199	13	0	**234**	0	23	7	99	0	**129**	0	24	95	53	7	**179**	0	91	3	20	0	**114**	0	**656**
5:15PM	40	259	7	1	**307**	0	21	3	56	0	**80**	0	21	116	60	0	**197**	0	54	4	13	0	**71**	0	**655**
Total	113	1050	40	1	**1204**	0	75	17	286	0	**378**	0	75	431	216	11	**733**	0	280	10	72	0	**362**	0	**2677**
% Approach	9.4%	87.2%	3.3%	0.1%	**-**	-	19.8%	4.5%	75.7%	0%	**-**	-	10.2%	58.8%	29.5%	1.5%	**-**	-	77.3%	2.8%	19.9%	0%	**-**	-	-
% Total	4.2%	39.2%	1.5%	0%	**45.0%**	-	2.8%	0.6%	10.7%	0%	**14.1%**	-	2.8%	16.1%	8.1%	0.4%	**27.4%**	-	10.5%	0.4%	2.7%	0%	**13.5%**	-	-
PHF	0.706	0.858	0.769	0.250	**0.883**	-	0.815	0.607	0.722	-	**0.733**	-	0.781	0.929	0.900	0.393	**0.930**	-	0.769	0.750	0.857	-	**0.792**	-	0.957
Motorcycles	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Motorcycles	0.9%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	111	1028	40	1	**1180**	-	74	15	283	0	**372**	-	74	424	209	10	**717**	-	277	8	71	0	**356**	-	2625
% Lights	98.2%	97.9%	100%	100%	**98.0%**	-	98.7%	88.2%	99.0%	0%	**98.4%**	-	98.7%	98.4%	96.8%	90.9%	**97.8%**	-	98.9%	80.0%	98.6%	0%	**98.3%**	-	98.1%
Single-Unit Trucks	1	11	0	0	**12**	-	0	1	2	0	**3**	-	0	2	6	0	**8**	-	2	1	0	0	**3**	-	26
% Single-Unit Trucks	0.9%	1.0%	0%	0%	**1.0%**	-	0%	5.9%	0.7%	0%	**0.8%**	-	0%	0.5%	2.8%	0%	**1.1%**	-	0.7%	10.0%	0%	0%	**0.8%**	-	1.0%
Articulated Trucks	0	4	0	0	**4**	-	0	0	1	0	**1**	-	1	2	1	0	**4**	-	1	0	1	0	**2**	-	11
% Articulated Trucks	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0.3%	0%	**0.3%**	-	1.3%	0.5%	0.5%	0%	**0.5%**	-	0.4%	0%	1.4%	0%	**0.6%**	-	0.4%
Buses	0	7	0	0	**7**	-	1	1	0	0	**2**	-	0	3	0	1	**4**	-	0	0	0	0	**0**	-	13
% Buses	0%	0.7%	0%	0%	**0.6%**	-	1.3%	5.9%	0%	0%	**0.5%**	-	0%	0.7%	0%	9.1%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.5%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	10.0%	0%	0%	**0.3%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (1) Granite @ Wood TMC - TMC

Sat May 6, 2023
Midday Peak (WKND), PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065000, Location: 42.226091, -71.031899

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Rockdale Street						Granite Street (Route 37)						Wood Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	18	199	8	0	**225**	0	5	2	16	0	**23**	0	10	94	76	3	**183**	0	47	2	13	0	**62**	0	**493**
1:15PM	16	169	12	0	**197**	0	3	2	17	0	**22**	3	15	93	75	1	**184**	2	52	0	9	0	**61**	0	**464**
1:30PM	21	205	5	0	**231**	0	12	0	16	0	**28**	0	12	93	55	4	**164**	1	44	3	11	0	**58**	0	**481**
1:45PM	22	224	3	0	**249**	0	8	0	17	0	**25**	0	11	91	65	5	**172**	1	44	1	20	0	**65**	0	**511**
Total	77	797	28	0	**902**	0	28	4	66	0	**98**	3	48	371	271	13	**703**	4	187	6	53	0	**246**	0	**1949**
% Approach	8.5%	88.4%	3.1%	0%	**-**	-	28.6%	4.1%	67.3%	0%	**-**	-	6.8%	52.8%	38.5%	1.8%	**-**	-	76.0%	2.4%	21.5%	0%	**-**	-	-
% Total	4.0%	40.9%	1.4%	0%	**46.3%**	-	1.4%	0.2%	3.4%	0%	**5.0%**	-	2.5%	19.0%	13.9%	0.7%	**36.1%**	-	9.6%	0.3%	2.7%	0%	**12.6%**	-	-
PHF	0.875	0.888	0.583	-	**0.905**	-	0.583	0.500	0.971	-	**0.875**	-	0.783	0.987	0.891	0.650	**0.954**	-	0.899	0.500	0.663	-	**0.946**	-	0.953
Motorcycles	0	4	0	0	**4**	-	0	0	1	0	**1**	-	1	4	4	0	**9**	-	1	0	1	0	**2**	-	16
% Motorcycles	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	1.5%	0%	**1.0%**	-	2.1%	1.1%	1.5%	0%	**1.3%**	-	0.5%	0%	1.9%	0%	**0.8%**	-	0.8%
Lights	77	783	28	0	**888**	-	28	4	65	0	**97**	-	46	364	266	13	**689**	-	186	6	52	0	**244**	-	1918
% Lights	100%	98.2%	100%	0%	**98.4%**	-	100%	100%	98.5%	0%	**99.0%**	-	95.8%	98.1%	98.2%	100%	**98.0%**	-	99.5%	100%	98.1%	0%	**99.2%**	-	98.4%
Single-Unit Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	2	1	0	**3**	-	0	0	0	0	**0**	-	7
% Single-Unit Trucks	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0.4%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	6
% Buses	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	2.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	- 100%	-	-	-	-	-	- 75.0%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	- 25.0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (2) Granite @ 93 SB Ramps TMC - TMC

Thu May 4, 2023
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065001, Location: 42.224078, -71.031563

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						North Street						Granite Street (Route 37)						I-93 SB Ramps						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	21	29	0	0	**50**	0	0	1	0	0	**1**	0	3	88	56	0	**147**	0	60	0	11	0	**71**	0	**269**
6:15AM	21	34	0	0	**55**	0	0	0	0	0	**0**	0	2	100	68	0	**170**	0	58	0	13	0	**71**	0	**296**
6:30AM	23	63	0	0	**86**	0	0	0	0	0	**0**	0	0	144	80	0	**224**	0	56	0	14	0	**70**	0	**380**
6:45AM	25	52	0	0	**77**	0	1	0	1	0	**2**	0	1	196	74	0	**271**	0	72	0	26	0	**98**	1	**448**
Hourly Total	90	178	0	0	**268**	0	1	1	1	0	**3**	0	6	528	278	0	**812**	0	246	0	64	0	**310**	1	**1393**
7:00AM	27	64	0	0	**91**	0	2	1	1	0	**4**	0	1	176	81	0	**258**	0	45	2	25	0	**72**	0	**425**
7:15AM	30	72	0	0	**102**	0	0	0	1	0	**1**	0	0	282	100	1	**383**	0	66	0	20	0	**86**	0	**572**
7:30AM	44	102	0	0	**146**	0	0	0	0	0	**0**	0	0	316	95	0	**411**	0	55	1	22	0	**78**	0	**635**
7:45AM	46	112	0	0	**158**	0	0	0	0	0	**0**	0	0	332	128	0	**460**	0	72	1	43	0	**116**	0	**734**
Hourly Total	147	350	0	0	**497**	0	2	1	2	0	**5**	0	1	1106	404	1	**1512**	0	238	4	110	0	**352**	0	**2366**
8:00AM	51	99	0	0	**150**	0	0	0	0	0	**0**	0	0	325	156	0	**481**	0	81	0	38	0	**119**	1	**750**
8:15AM	45	125	0	3	**173**	0	0	0	0	0	**0**	0	2	337	79	0	**418**	0	83	0	46	0	**129**	0	**720**
8:30AM	47	118	0	1	**166**	0	0	1	1	0	**2**	0	2	346	99	0	**447**	0	91	2	47	0	**140**	0	**755**
8:45AM	43	107	0	0	**150**	0	1	0	0	0	**1**	0	1	321	51	0	**373**	0	129	1	64	0	**194**	0	**718**
Hourly Total	186	449	0	4	**639**	0	1	1	1	0	**3**	0	5	1329	385	0	**1719**	0	384	3	195	0	**582**	1	**2943**
3:00PM	90	221	2	0	**313**	0	3	1	4	0	**8**	0	5	177	108	0	**290**	0	110	2	24	0	**136**	0	**747**
3:15PM	84	295	4	0	**383**	0	1	3	3	0	**7**	0	10	151	109	0	**270**	0	113	2	23	0	**138**	0	**798**
3:30PM	96	266	1	2	**365**	0	0	5	6	0	**11**	1	3	157	102	0	**262**	0	101	1	19	0	**121**	0	**759**
3:45PM	92	265	3	2	**362**	0	3	4	9	0	**16**	0	6	158	104	0	**268**	0	120	0	21	0	**141**	0	**787**
Hourly Total	362	1047	10	4	**1423**	0	7	13	22	0	**42**	1	24	643	423	0	**1090**	0	444	5	87	0	**536**	0	**3091**
4:00PM	97	301	6	0	**404**	0	4	4	3	0	**11**	0	0	140	85	0	**225**	0	111	0	30	0	**141**	0	**781**
4:15PM	86	291	0	1	**378**	0	3	1	6	0	**10**	0	2	144	80	2	**228**	0	108	2	17	0	**127**	0	**743**
4:30PM	130	302	2	1	**435**	0	1	2	2	0	**5**	0	5	149	99	0	**253**	0	112	1	17	0	**130**	0	**823**
4:45PM	103	326	1	0	**430**	0	0	0	10	0	**10**	0	6	161	103	1	**271**	0	133	4	18	0	**155**	0	**866**
Hourly Total	416	1220	9	2	**1647**	0	8	7	21	0	**36**	0	13	594	367	3	**977**	0	464	7	82	0	**553**	0	**3213**
5:00PM	104	292	0	2	**398**	0	2	1	6	0	**9**	0	4	160	106	1	**271**	0	130	3	24	0	**157**	0	**835**
5:15PM	80	312	2	1	**395**	0	2	1	3	0	**6**	0	8	175	117	0	**300**	0	112	1	14	0	**127**	0	**828**
5:30PM	91	298	0	0	**389**	0	2	2	0	0	**4**	0	5	160	103	0	**268**	0	116	4	24	0	**144**	0	**805**
5:45PM	131	271	3	0	**405**	0	3	6	2	0	**11**	0	5	156	125	0	**286**	0	129	2	18	1	**150**	0	**852**
Hourly Total	406	1173	5	3	**1587**	0	9	10	11	0	**30**	0	22	651	451	1	**1125**	0	487	10	80	1	**578**	0	**3320**
2023-05-06 11:00AM	71	198	2	0	**271**	0	2	0	10	0	**12**	0	18	118	89	0	**225**	0	123	0	23	0	**146**	0	**654**
11:15AM	53	196	6	0	**255**	0	2	10	6	0	**18**	0	8	121	125	0	**254**	0	138	0	12	0	**150**	0	**677**
11:30AM	61	143	4	1	**209**	0	3	4	9	0	**16**	0	10	137	104	0	**251**	0	138	0	19	0	**157**	0	**633**
11:45AM	63	212	1	1	**277**	0	3	4	12	0	**19**	0	12	162	99	0	**273**	0	146	0	24	0	**170**	0	**739**
Hourly Total	248	749	13	2	**1012**	0	10	18	37	0	**65**	0	48	538	417	0	**1003**	0	545	0	78	0	**623**	0	**2703**
12:00PM	56	163	1	1	**221**	0	3	7	7	0	**17**	0	16	131	137	0	**284**	0	152	5	14	0	**171**	0	**693**
12:15PM	52	214	1	0	**267**	0	2	4	15	0	**21**	1	16	155	116	0	**287**	0	131	6	17	0	**154**	0	**729**
12:30PM	65	182	0	0	**247**	0	3	5	5	0	**13**	0	14	133	140	0	**287**	0	151	8	25	0	**184**	0	**731**
12:45PM	49	178	3	0	**230**	0	4	3	19	0	**26**	0	11	138	136	0	**285**	0	174	2	12	1	**189**	0	**730**
Hourly Total	222	737	5	1	**965**	0	12	19	46	0	**77**	1	57	557	529	0	**1143**	0	608	21	68	1	**698**	0	**2883**
1:00PM	49	210	2	1	**262**	0	4	8	16	1	**29**	0	22	148	157	0	**327**	0	165	5	25	0	**195**	0	**813**
1:15PM	63	186	0	0	**249**	0	7	6	8	0	**21**	1	6	145	137	0	**288**	0	146	5	24	0	**175**	1	**733**
1:30PM	64	180	4	0	**248**	0	2	7	15	0	**24**	0	22	150	164	0	**336**	0	137	4	15	0	**156**	0	**764**
1:45PM	72	212	3	1	**288**	0	4	6	15	0	**25**	0	16	156	160	0	**332**	0	122	9	18	0	**149**	0	**794**
Hourly Total	248	788	9	2	**1047**	0	17	27	54	1	**99**	1	66	599	618	0	**1283**	0	570	23	82	0	**675**	1	**3104**
Total	2325	6691	51	18	**9085**	0	67	97	195	1	**360**	3	242	6545	3872	5	**10664**	0	3986	73	846	2	**4907**	3	**25016**
% Approach	25.6%	73.6%	0.6%	0.2%	**-**	-	18.6%	26.9%	54.2%	0.3%	**-**	-	2.3%	61.4%	36.3%	0%	**-**	-	81.2%	1.5%	17.2%	0%	**-**	-	-
% Total	9.3%	26.7%	0.2%	0.1%	**36.3%**	-	0.3%	0.4%	0.8%	0%	**1.4%**	-	1.0%	26.2%	15.5%	0%	**42.6%**	-	15.9%	0.3%	3.4%	0%	**19.6%**	-	-
Motorcycles	2	14	0	0	**16**	-	0	0	0	0	**0**	-	0	10	9	0	**19**	-	4	0	4	0	**8**	-	43
% Motorcycles	0.1%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0.2%	0%	**0.2%**	-	0.1%	0%	0.5%	0%	**0.2%**	-	0.2%
Lights	2248	6515	51	18	**8832**	-	67	97	193	1	**358**	-	240	6328	3719	5	**10292**	-	3884	73	818	2	**4777**	-	24259
% Lights	96.7%	97.4%	100%	100%	**97.2%**	-	100%	100%	99.0%	100%	**99.4%**	-	99.2%	96.7%	96.0%	100%	**96.5%**	-	97.4%	100%	96.7%	100%	**97.4%**	-	97.0%
Single-Unit Trucks	58	81	0	0	**139**	-	0	0	2	0	**2**	-	2	127	86	0	**215**	-	40	0	19	0	**59**	-	415
% Single-Unit Trucks	2.5%	1.2%	0%	0%	**1.5%**	-	0%	0%	1.0%	0%	**0.6%**	-	0.8%	1.9%	2.2%	0%	**2.0%**	-	1.0%	0%	2.2%	0%	**1.2%**	-	1.7%
Articulated Trucks	12	22	0	0	**34**	-	0	0	0	0	**0**	-	0	35	47	0	**82**	-	26	0	5	0	**31**	-	147
% Articulated Trucks	0.5%	0.3%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	1.2%	0%	**0.8%**	-	0.7%	0%	0.6%	0%	**0.6%**	-	0.6%
Buses	5	58	0	0	**63**	-	0	0	0	0	**0**	-	0	42	11	0	**53**	-	32	0	0	0	**32**	-	148
% Buses	0.2%	0.9%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0.3%	0%	**0.5%**	-	0.8%	0%	0%	0%	**0.7%**	-	0.6%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	4
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%

Leg	Granite Street (Route 37)						North Street						Granite Street (Route 37)						I-93 SB Ramps						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	- 66.7%	-	-	-	-	-	-	-	-	-	-	-	- 66.7%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	- 33.3%	-	-	-	-	-	-	-	-	-	-	-	- 33.3%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (2) Granite @ 93 SB Ramps TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065001, Location: 42.224078, -71.031563

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						North Street Westbound						Granite Street (Route 37) Northbound						I-93 SB Ramps Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	46	112	0	0	**158**	0	0	0	0	0	**0**	0	0	332	128	0	**460**	0	72	1	43	0	**116**	0	**734**
8:00AM	51	99	0	0	**150**	0	0	0	0	0	**0**	0	0	325	156	0	**481**	0	81	0	38	0	**119**	1	**750**
8:15AM	45	125	0	3	**173**	0	0	0	0	0	**0**	0	2	337	79	0	**418**	0	83	0	46	0	**129**	0	**720**
8:30AM	47	118	0	1	**166**	0	0	1	1	0	**2**	0	2	346	99	0	**447**	0	91	2	47	0	**140**	0	**755**
Total	189	454	0	4	**647**	0	0	1	1	0	**2**	0	4	1340	462	0	**1806**	0	327	3	174	0	**504**	1	**2959**
% Approach	29.2%	70.2%	0%	0.6%	**-**	-	0%	50.0%	50.0%	0%	**-**	-	0.2%	74.2%	25.6%	0%	**-**	-	64.9%	0.6%	34.5%	0%	**-**	-	-
% Total	6.4%	15.3%	0%	0.1%	**21.9%**	-	0%	0%	0%	0%	**0.1%**	-	0.1%	45.3%	15.6%	0%	**61.0%**	-	11.1%	0.1%	5.9%	0%	**17.0%**	-	-
PHF	0.926	0.908	-	0.333	**0.935**	-	-	0.250	0.250	-	**0.250**	-	0.500	0.968	0.740	-	**0.939**	-	0.898	0.375	0.926	-	**0.900**	-	0.980
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	179	423	0	4	**606**	-	0	1	1	0	**2**	-	4	1289	426	0	**1719**	-	306	3	166	0	**475**	-	2802
% Lights	94.7%	93.2%	0%	100%	**93.7%**	-	0%	100%	100%	0%	**100%**	-	100%	96.2%	92.2%	0%	**95.2%**	-	93.6%	100%	95.4%	0%	**94.2%**	-	94.7%
Single-Unit Trucks	8	12	0	0	**20**	-	0	0	0	0	**0**	-	0	41	28	0	**69**	-	11	0	6	0	**17**	-	106
% Single-Unit Trucks	4.2%	2.6%	0%	0%	**3.1%**	-	0%	0%	0%	0%	**0%**	-	0%	3.1%	6.1%	0%	**3.8%**	-	3.4%	0%	3.4%	0%	**3.4%**	-	3.6%
Articulated Trucks	2	4	0	0	**6**	-	0	0	0	0	**0**	-	0	6	6	0	**12**	-	4	0	2	0	**6**	-	24
% Articulated Trucks	1.1%	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	1.3%	0%	**0.7%**	-	1.2%	0%	1.1%	0%	**1.2%**	-	0.8%
Buses	0	15	0	0	**15**	-	0	0	0	0	**0**	-	0	4	2	0	**6**	-	6	0	0	0	**6**	-	27
% Buses	0%	3.3%	0%	0%	**2.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0.4%	0%	**0.3%**	-	1.8%	0%	0%	0%	**1.2%**	-	0.9%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (2) Granite @ 93 SB Ramps TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065001, Location: 42.224078, -71.031563

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						North Street Westbound						Granite Street (Route 37) Northbound						I-93 SB Ramps Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	130	302	2	1	**435**	0	1	2	2	0	**5**	0	5	149	99	0	**253**	0	112	1	17	0	**130**	0	**823**
4:45PM	103	326	1	0	**430**	0	0	0	10	0	**10**	0	6	161	103	1	**271**	0	133	4	18	0	**155**	0	**866**
5:00PM	104	292	0	2	**398**	0	2	1	6	0	**9**	0	4	160	106	1	**271**	0	130	3	24	0	**157**	0	**835**
5:15PM	80	312	2	1	**395**	0	2	1	3	0	**6**	0	8	175	117	0	**300**	0	112	1	14	0	**127**	0	**828**
Total	417	1232	5	4	**1658**	0	5	4	21	0	**30**	0	23	645	425	2	**1095**	0	487	9	73	0	**569**	0	**3352**
% Approach	25.2%	74.3%	0.3%	0.2%	**-**	-	16.7%	13.3%	70.0%	0%	**-**	-	2.1%	58.9%	38.8%	0.2%	**-**	-	85.6%	1.6%	12.8%	0%	**-**	-	-
% Total	12.4%	36.8%	0.1%	0.1%	**49.5%**	-	0.1%	0.1%	0.6%	0%	**0.9%**	-	0.7%	19.2%	12.7%	0.1%	**32.7%**	-	14.5%	0.3%	2.2%	0%	**17.0%**	-	-
PHF	0.802	0.945	0.625	0.500	**0.953**	-	0.625	0.500	0.525	-	**0.750**	-	0.719	0.921	0.908	0.500	**0.913**	-	0.915	0.563	0.760	-	**0.906**	-	0.968
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	415	1210	5	4	**1634**	-	5	4	20	0	**29**	-	23	635	420	2	**1080**	-	470	9	72	0	**551**	-	3294
% Lights	99.5%	98.2%	100%	100%	**98.6%**	-	100%	100%	95.2%	0%	**96.7%**	-	100%	98.4%	98.8%	100%	**98.6%**	-	96.5%	100%	98.6%	0%	**96.8%**	-	98.3%
Single-Unit Trucks	1	8	0	0	**9**	-	0	0	1	0	**1**	-	0	7	3	0	**10**	-	5	0	0	0	**5**	-	25
% Single-Unit Trucks	0.2%	0.6%	0%	0%	**0.5%**	-	0%	0%	4.8%	0%	**3.3%**	-	0%	1.1%	0.7%	0%	**0.9%**	-	1.0%	0%	0%	0%	**0.9%**	-	0.7%
Articulated Trucks	1	5	0	0	**6**	-	0	0	0	0	**0**	-	0	0	2	0	**2**	-	4	0	1	0	**5**	-	13
% Articulated Trucks	0.2%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.5%	0%	**0.2%**	-	0.8%	0%	1.4%	0%	**0.9%**	-	0.4%
Buses	0	9	0	0	**9**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	8	0	0	0	**8**	-	20
% Buses	0%	0.7%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.3%**	-	1.6%	0%	0%	0%	**1.4%**	-	0.6%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (2) Granite @ 93 SB Ramps TMC - TMC

Sat May 6, 2023
Midday Peak (WKND), PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065001, Location: 42.224078, -71.031563

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						North Street						Granite Street (Route 37)						I-93 SB Ramps						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	49	210	2	1	**262**	0	4	8	16	1	**29**	0	22	148	157	0	**327**	0	165	5	25	0	**195**	0	**813**
1:15PM	63	186	0	0	**249**	0	7	6	8	0	**21**	1	6	145	137	0	**288**	0	146	5	24	0	**175**	1	**733**
1:30PM	64	180	4	0	**248**	0	2	7	15	0	**24**	0	22	150	164	0	**336**	0	137	4	15	0	**156**	0	**764**
1:45PM	72	212	3	1	**288**	0	4	6	15	0	**25**	0	16	156	160	0	**332**	0	122	9	18	0	**149**	0	**794**
Total	248	788	9	2	**1047**	0	17	27	54	1	**99**	1	66	599	618	0	**1283**	0	570	23	82	0	**675**	1	**3104**
% Approach	23.7%	75.3%	0.9%	0.2%	**-**	-	17.2%	27.3%	54.5%	1.0%	**-**	-	5.1%	46.7%	48.2%	0%	**-**	-	84.4%	3.4%	12.1%	0%	**-**	-	**-**
% Total	8.0%	25.4%	0.3%	0.1%	**33.7%**	-	0.5%	0.9%	1.7%	0%	**3.2%**	-	2.1%	19.3%	19.9%	0%	**41.3%**	-	18.4%	0.7%	2.6%	0%	**21.7%**	-	**-**
PHF	0.861	0.929	0.563	0.500	**0.909**	-	0.607	0.844	0.844	0.250	**0.853**	-	0.750	0.957	0.942	-	**0.959**	-	0.864	0.639	0.820	-	**0.865**	-	0.954
Motorcycles	2	3	0	0	**5**	-	0	0	0	0	**0**	-	0	5	2	0	**7**	-	1	0	3	0	**4**	-	16
% Motorcycles	0.8%	0.4%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0.3%	0%	**0.5%**	-	0.2%	0%	3.7%	0%	**0.6%**	-	0.5%
Lights	245	777	9	2	**1033**	-	17	27	54	1	**99**	-	66	588	613	0	**1267**	-	562	23	79	0	**664**	-	3063
% Lights	98.8%	98.6%	100%	100%	**98.7%**	-	100%	100%	100%	100%	**100%**	-	100%	98.2%	99.2%	0%	**98.8%**	-	98.6%	100%	96.3%	0%	**98.4%**	-	98.7%
Single-Unit Trucks	1	2	0	0	**3**	-	0	0	0	0	**0**	-	0	3	1	0	**4**	-	5	0	0	0	**5**	-	12
% Single-Unit Trucks	0.4%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0.2%	0%	**0.3%**	-	0.9%	0%	0%	0%	**0.7%**	-	0.4%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.2%	0%	0%	0%	**0.1%**	-	0%
Buses	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	1	2	0	**3**	-	1	0	0	0	**1**	-	10
% Buses	0%	0.8%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0.3%	0%	**0.2%**	-	0.2%	0%	0%	0%	**0.1%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (3) Granite @ 93 NB Ramps TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065003, Location: 42.221729, -71.029891

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)					I-93 NB Onramp			Granite Street (Route 37)					I-93 NB Ramps					
Direction	Southbound					Westbound			Northbound					Eastbound					
Time	R	T	U	App	Ped*	L	App	Ped*	R	T	U	App	Ped*	R	L	U	App	Ped*	Int
2023-05-04 6:00AM	9	74	0	**83**	0	0	**0**	0	91	137	0	**228**	0	42	17	0	**59**	0	**370**
6:15AM	6	88	0	**94**	0	0	**0**	0	101	136	0	**237**	0	62	25	0	**87**	0	**418**
6:30AM	11	110	0	**121**	0	0	**0**	0	101	185	0	**286**	0	57	36	0	**93**	0	**500**
6:45AM	9	117	0	**126**	0	0	**0**	0	121	232	0	**353**	0	76	44	0	**120**	1	**599**
Hourly Total	35	389	0	**424**	0	0	**0**	0	414	690	0	**1104**	0	237	122	0	**359**	1	**1887**
7:00AM	16	100	0	**116**	0	0	**0**	0	141	221	0	**362**	0	67	37	0	**104**	0	**582**
7:15AM	19	118	0	**137**	0	0	**0**	0	114	287	0	**401**	0	54	99	0	**153**	0	**691**
7:30AM	20	131	0	**151**	0	0	**0**	0	136	309	0	**445**	0	82	111	0	**193**	0	**789**
7:45AM	29	159	0	**188**	0	0	**0**	0	143	358	0	**501**	0	114	116	0	**230**	0	**919**
Hourly Total	84	508	0	**592**	0	0	**0**	0	534	1175	0	**1709**	0	317	363	0	**680**	0	**2981**
8:00AM	19	158	0	**177**	0	0	**0**	1	157	364	0	**521**	0	88	94	0	**182**	0	**880**
8:15AM	28	181	0	**209**	0	0	**0**	0	119	303	0	**422**	0	101	127	0	**228**	0	**859**
8:30AM	32	175	0	**207**	0	0	**0**	0	97	322	0	**419**	0	133	133	0	**266**	0	**892**
8:45AM	21	223	0	**244**	0	0	**0**	0	91	256	0	**347**	0	140	102	0	**242**	0	**833**
Hourly Total	100	737	0	**837**	0	0	**0**	1	464	1245	0	**1709**	0	462	456	0	**918**	0	**3464**
3:00PM	35	300	0	**335**	0	0	**0**	0	146	257	0	**403**	0	156	43	0	**199**	0	**937**
3:15PM	59	345	0	**404**	0	0	**0**	0	140	238	0	**378**	0	173	40	0	**213**	0	**995**
3:30PM	37	361	0	**398**	0	0	**0**	0	143	211	0	**354**	0	125	41	0	**166**	0	**918**
3:45PM	39	354	0	**393**	0	0	**0**	0	121	249	0	**370**	0	141	29	0	**170**	0	**933**
Hourly Total	170	1360	0	**1530**	0	0	**0**	0	550	955	0	**1505**	0	595	153	0	**748**	0	**3783**
4:00PM	49	372	0	**421**	0	0	**0**	0	142	209	0	**351**	0	146	21	0	**167**	0	**939**
4:15PM	45	352	0	**397**	0	0	**0**	0	133	190	0	**323**	0	160	40	0	**200**	0	**920**
4:30PM	50	363	0	**413**	0	0	**0**	0	119	215	0	**334**	0	132	45	0	**177**	0	**924**
4:45PM	60	398	0	**458**	0	0	**0**	0	172	220	0	**392**	0	133	41	0	**174**	0	**1024**
Hourly Total	204	1485	0	**1689**	0	0	**0**	0	566	834	0	**1400**	0	571	147	0	**718**	0	**3807**
5:00PM	85	351	0	**436**	0	0	**0**	0	159	216	0	**375**	0	155	53	0	**208**	0	**1019**
5:15PM	67	352	0	**419**	0	0	**0**	0	170	254	0	**424**	0	128	42	0	**170**	0	**1013**
5:30PM	48	359	0	**407**	0	0	**0**	0	146	234	0	**380**	0	151	45	0	**196**	0	**983**
5:45PM	45	333	0	**378**	0	0	**0**	0	165	260	0	**425**	0	169	33	0	**202**	0	**1005**
Hourly Total	245	1395	0	**1640**	0	0	**0**	0	640	964	0	**1604**	0	603	173	0	**776**	0	**4020**
2023-05-06 11:00AM	38	295	0	**333**	0	0	**0**	0	135	186	0	**321**	0	174	43	0	**217**	0	**871**
11:15AM	44	306	0	**350**	0	0	**0**	0	170	207	0	**377**	0	191	41	0	**232**	0	**959**
11:30AM	23	265	0	**288**	0	0	**0**	0	161	212	0	**373**	0	174	40	0	**214**	0	**875**
11:45AM	44	317	0	**361**	0	0	**0**	0	157	238	0	**395**	0	171	49	0	**220**	0	**976**
Hourly Total	149	1183	0	**1332**	0	0	**0**	0	623	843	0	**1466**	0	710	173	0	**883**	0	**3681**
12:00PM	39	293	0	**332**	0	0	**0**	0	138	232	0	**370**	0	179	51	0	**230**	1	**932**
12:15PM	43	321	0	**364**	0	0	**0**	0	175	256	0	**431**	0	169	48	0	**217**	0	**1012**
12:30PM	34	306	0	**340**	0	0	**0**	0	187	243	0	**430**	0	146	44	0	**190**	0	**960**
12:45PM	33	346	0	**379**	0	0	**0**	0	178	248	0	**426**	0	182	42	0	**224**	0	**1029**
Hourly Total	149	1266	0	**1415**	0	0	**0**	0	678	979	0	**1657**	0	676	185	0	**861**	1	**3933**
1:00PM	46	353	0	**399**	0	0	**0**	0	185	296	0	**481**	0	163	40	0	**203**	0	**1083**
1:15PM	38	302	0	**340**	0	0	**0**	0	212	261	0	**473**	0	188	41	0	**229**	0	**1042**
1:30PM	39	294	0	**333**	0	0	**0**	0	203	290	0	**493**	0	172	41	0	**213**	0	**1039**
1:45PM	32	313	0	**345**	0	0	**0**	0	183	279	0	**462**	0	186	33	0	**219**	0	**1026**
Hourly Total	155	1262	0	**1417**	0	0	**0**	0	783	1126	0	**1909**	0	709	155	0	**864**	0	**4190**
Total	1291	9585	0	**10876**	0	0	**0**	1	5252	8811	0	**14063**	0	4880	1927	0	**6807**	2	**31746**
% Approach	11.9%	88.1%	0%	**-**	-	0%	**-**	-	37.3%	62.7%	0%	**-**	-	71.7%	28.3%	0%	**-**	-	-
% Total	4.1%	30.2%	0%	**34.3%**	-	0%	**0%**	-	16.5%	27.8%	0%	**44.3%**	-	15.4%	6.1%	0%	**21.4%**	-	-
Motorcycles	2	20	0	**22**	-	0	**0**	-	9	13	0	**22**	-	10	3	0	**13**	-	57
% Motorcycles	0.2%	0.2%	0%	**0.2%**	-	0%	**-**	-	0.2%	0.1%	0%	**0.2%**	-	0.2%	0.2%	0%	**0.2%**	-	0.2%
Lights	1260	9314	0	**10574**	-	0	**0**	-	5102	8534	0	**13636**	-	4727	1843	0	**6570**	-	30780
% Lights	97.6%	97.2%	0%	**97.2%**	-	0%	**-**	-	97.1%	96.9%	0%	**97.0%**	-	96.9%	95.6%	0%	**96.5%**	-	97.0%

Leg Direction	Granite Street (Route 37) Southbound					I-93 NB Onramp Westbound			Granite Street (Route 37) Northbound					I-93 NB Ramps Eastbound					
Time	R	T	U	**App**	Ped*	L	**App**	Ped*	R	T	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
Single-Unit Trucks	24	108	0	**132**	-	0	**0**	-	71	145	0	**216**	-	82	62	0	**144**	-	492
% Single-Unit Trucks	1.9%	1.1%	0%	**1.2%**	-	0%	**-**	-	1.4%	1.6%	0%	**1.5%**	-	1.7%	3.2%	0%	**2.1%**	-	1.5%
Articulated Trucks	4	44	0	**48**	-	0	**0**	-	29	68	0	**97**	-	54	16	0	**70**	-	215
% Articulated Trucks	0.3%	0.5%	0%	**0.4%**	-	0%	**-**	-	0.6%	0.8%	0%	**0.7%**	-	1.1%	0.8%	0%	**1.0%**	-	0.7%
Buses	1	96	0	**97**	-	0	**0**	-	41	47	0	**88**	-	7	3	0	**10**	-	195
% Buses	0.1%	1.0%	0%	**0.9%**	-	0%	**-**	-	0.8%	0.5%	0%	**0.6%**	-	0.1%	0.2%	0%	**0.1%**	-	0.6%
Bicycles on Road	0	3	0	**3**	-	0	**0**	-	0	4	0	**4**	-	0	0	0	**0**	-	7
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	**-**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	1	-	-	-	-	0	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (3) Granite @ 93 NB Ramps TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065003, Location: 42.221729, -71.029891

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound					I-93 NB Onramp Westbound			Granite Street (Route 37) Northbound					I-93 NB Ramps Eastbound					
Time	R	T	U	**App**	Ped*	L	**App**	Ped*	R	T	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	29	159	0	**188**	0	0	**0**	0	143	358	0	**501**	0	114	116	0	**230**	0	**919**
8:00AM	19	158	0	**177**	0	0	**0**	1	157	364	0	**521**	0	88	94	0	**182**	0	**880**
8:15AM	28	181	0	**209**	0	0	**0**	0	119	303	0	**422**	0	101	127	0	**228**	0	**859**
8:30AM	32	175	0	**207**	0	0	**0**	0	97	322	0	**419**	0	133	133	0	**266**	0	**892**
Total	108	673	0	**781**	0	0	**0**	1	516	1347	0	**1863**	0	436	470	0	**906**	0	**3550**
% Approach	13.8%	86.2%	0%	**-**	-	0%	**-**	-	27.7%	72.3%	0%	**-**	-	48.1%	51.9%	0%	**-**	-	**-**
% Total	3.0%	19.0%	0%	**22.0%**	-	0%	**0%**	-	14.5%	37.9%	0%	**52.5%**	-	12.3%	13.2%	0%	**25.5%**	-	**-**
PHF	0.844	0.930	-	**0.934**	-	-	**-**	-	0.822	0.925	-	**0.894**	-	0.820	0.883	-	**0.852**	-	0.966
Motorcycles	0	0	0	**0**	-	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	**-**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	99	627	0	**726**	-	0	**0**	-	487	1283	0	**1770**	-	408	447	0	**855**	-	3351
% Lights	91.7%	93.2%	0%	**93.0%**	-	0%	**-**	-	94.4%	95.2%	0%	**95.0%**	-	93.6%	95.1%	0%	**94.4%**	-	94.4%
Single-Unit Trucks	7	17	0	**24**	-	0	**0**	-	21	48	0	**69**	-	17	20	0	**37**	-	130
% Single-Unit Trucks	6.5%	2.5%	0%	**3.1%**	-	0%	**-**	-	4.1%	3.6%	0%	**3.7%**	-	3.9%	4.3%	0%	**4.1%**	-	3.7%
Articulated Trucks	2	6	0	**8**	-	0	**0**	-	6	9	0	**15**	-	11	3	0	**14**	-	37
% Articulated Trucks	1.9%	0.9%	0%	**1.0%**	-	0%	**-**	-	1.2%	0.7%	0%	**0.8%**	-	2.5%	0.6%	0%	**1.5%**	-	1.0%
Buses	0	23	0	**23**	-	0	**0**	-	2	7	0	**9**	-	0	0	0	**0**	-	32
% Buses	0%	3.4%	0%	**2.9%**	-	0%	**-**	-	0.4%	0.5%	0%	**0.5%**	-	0%	0%	0%	**0%**	-	0.9%
Bicycles on Road	0	0	0	**0**	-	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	**-**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	1	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (3) Granite @ 93 NB Ramps TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065003, Location: 42.221729, -71.029891

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound					I-93 NB Onramp Westbound			Granite Street (Route 37) Northbound					I-93 NB Ramps Eastbound					
Time	R	T	U	**App**	Ped*	L	**App**	Ped*	R	T	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-04 4:45PM	60	398	0	**458**	0	0	**0**	0	172	220	0	**392**	0	133	41	0	**174**	0	**1024**
5:00PM	85	351	0	**436**	0	0	**0**	0	159	216	0	**375**	0	155	53	0	**208**	0	**1019**
5:15PM	67	352	0	**419**	0	0	**0**	0	170	254	0	**424**	0	128	42	0	**170**	0	**1013**
5:30PM	48	359	0	**407**	0	0	**0**	0	146	234	0	**380**	0	151	45	0	**196**	0	**983**
Total	260	1460	0	**1720**	0	0	**0**	0	647	924	0	**1571**	0	567	181	0	**748**	0	**4039**
% Approach	15.1%	84.9%	0%	**-**	-	0%	**-**	-	41.2%	58.8%	0%	**-**	-	75.8%	24.2%	0%	**-**	-	**-**
% Total	6.4%	36.1%	0%	**42.6%**	-	0%	**0%**	-	16.0%	22.9%	0%	**38.9%**	-	14.0%	4.5%	0%	**18.5%**	-	**-**
PHF	0.765	0.917	-	**0.939**	-	-	**-**	-	0.940	0.909	-	**0.926**	-	0.915	0.854	-	**0.899**	-	0.986
Motorcycles	0	0	0	**0**	-	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	**-**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	258	1422	0	**1680**	-	0	**0**	-	638	911	0	**1549**	-	551	177	0	**728**	-	3957
% Lights	99.2%	97.4%	0%	**97.7%**	-	0%	**-**	-	98.6%	98.6%	0%	**98.6%**	-	97.2%	97.8%	0%	**97.3%**	-	98.0%
Single-Unit Trucks	1	14	0	**15**	-	0	**0**	-	4	8	0	**12**	-	7	4	0	**11**	-	38
% Single-Unit Trucks	0.4%	1.0%	0%	**0.9%**	-	0%	**-**	-	0.6%	0.9%	0%	**0.8%**	-	1.2%	2.2%	0%	**1.5%**	-	0.9%
Articulated Trucks	0	7	0	**7**	-	0	**0**	-	3	3	0	**6**	-	8	0	0	**8**	-	21
% Articulated Trucks	0%	0.5%	0%	**0.4%**	-	0%	**-**	-	0.5%	0.3%	0%	**0.4%**	-	1.4%	0%	0%	**1.1%**	-	0.5%
Buses	1	17	0	**18**	-	0	**0**	-	2	2	0	**4**	-	1	0	0	**1**	-	23
% Buses	0.4%	1.2%	0%	**1.0%**	-	0%	**-**	-	0.3%	0.2%	0%	**0.3%**	-	0.2%	0%	0%	**0.1%**	-	0.6%
Bicycles on Road	0	0	0	**0**	-	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	**-**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (3) Granite @ 93 NB Ramps TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:45PM - 1:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065003, Location: 42.221729, -71.029891

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound					I-93 NB Onramp Westbound			Granite Street (Route 37) Northbound					I-93 NB Ramps Eastbound					
Time	R	T	U	**App**	Ped*	L	**App**	Ped*	R	T	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-06 12:45PM	33	346	0	**379**	0	0	**0**	0	178	248	0	**426**	0	182	42	0	**224**	0	**1029**
1:00PM	46	353	0	**399**	0	0	**0**	0	185	296	0	**481**	0	163	40	0	**203**	0	**1083**
1:15PM	38	302	0	**340**	0	0	**0**	0	212	261	0	**473**	0	188	41	0	**229**	0	**1042**
1:30PM	39	294	0	**333**	0	0	**0**	0	203	290	0	**493**	0	172	41	0	**213**	0	**1039**
Total	156	1295	0	**1451**	0	0	**0**	0	778	1095	0	**1873**	0	705	164	0	**869**	0	**4193**
% Approach	10.8%	89.2%	0%	**-**	-	0%	**-**	-	41.5%	58.5%	0%	**-**	-	81.1%	18.9%	0%	**-**	-	**-**
% Total	3.7%	30.9%	0%	**34.6%**	-	0%	**0%**	-	18.6%	26.1%	0%	**44.7%**	-	16.8%	3.9%	0%	**20.7%**	-	**-**
PHF	0.848	0.916	-	**0.909**	-	-	**-**	-	0.917	0.922	-	**0.952**	-	0.938	0.976	-	**0.949**	-	0.967
Motorcycles	0	4	0	**4**	-	0	**0**	-	0	5	0	**5**	-	0	1	0	**1**	-	10
% Motorcycles	0%	0.3%	0%	**0.3%**	-	0%	**-**	-	0%	0.5%	0%	**0.3%**	-	0%	0.6%	0%	**0.1%**	-	0.2%
Lights	155	1270	0	**1425**	-	0	**0**	-	768	1080	0	**1848**	-	701	162	0	**863**	-	4136
% Lights	99.4%	98.1%	0%	**98.2%**	-	0%	**-**	-	98.7%	98.6%	0%	**98.7%**	-	99.4%	98.8%	0%	**99.3%**	-	98.6%
Single-Unit Trucks	1	11	0	**12**	-	0	**0**	-	3	2	0	**5**	-	1	1	0	**2**	-	19
% Single-Unit Trucks	0.6%	0.8%	0%	**0.8%**	-	0%	**-**	-	0.4%	0.2%	0%	**0.3%**	-	0.1%	0.6%	0%	**0.2%**	-	0.5%
Articulated Trucks	0	2	0	**2**	-	0	**0**	-	1	1	0	**2**	-	1	0	0	**1**	-	5
% Articulated Trucks	0%	0.2%	0%	**0.1%**	-	0%	**-**	-	0.1%	0.1%	0%	**0.1%**	-	0.1%	0%	0%	**0.1%**	-	0.1%
Buses	0	7	0	**7**	-	0	**0**	-	6	4	0	**10**	-	2	0	0	**2**	-	19
% Buses	0%	0.5%	0%	**0.5%**	-	0%	**-**	-	0.8%	0.4%	0%	**0.5%**	-	0.3%	0%	0%	**0.2%**	-	0.5%
Bicycles on Road	0	1	0	**1**	-	0	**0**	-	0	3	0	**3**	-	0	0	0	**0**	-	4
% Bicycles on Road	0%	0.1%	0%	**0.1%**	-	0%	**-**	-	0%	0.3%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (3) Granite @ 93 NB Ramps TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065003, Location: 42.221729, -71.029891

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound					I-93 NB Onramp Westbound			Granite Street (Route 37) Northbound					I-93 NB Ramps Eastbound					
Time	R	T	U	**App**	Ped*	L	**App**	Ped*	R	T	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	46	353	0	**399**	0	0	**0**	0	185	296	0	**481**	0	163	40	0	**203**	0	**1083**
1:15PM	38	302	0	**340**	0	0	**0**	0	212	261	0	**473**	0	188	41	0	**229**	0	**1042**
1:30PM	39	294	0	**333**	0	0	**0**	0	203	290	0	**493**	0	172	41	0	**213**	0	**1039**
1:45PM	32	313	0	**345**	0	0	**0**	0	183	279	0	**462**	0	186	33	0	**219**	0	**1026**
Total	155	1262	0	**1417**	0	0	**0**	0	783	1126	0	**1909**	0	709	155	0	**864**	0	**4190**
% Approach	10.9%	89.1%	0%	**-**	-	0%	**-**	-	41.0%	59.0%	0%	**-**	-	82.1%	17.9%	0%	**-**	-	**-**
% Total	3.7%	30.1%	0%	**33.8%**	-	0%	**0%**	-	18.7%	26.9%	0%	**45.6%**	-	16.9%	3.7%	0%	**20.6%**	-	**-**
PHF	0.842	0.893	-	**0.887**	-	-	**-**	-	0.923	0.948	-	**0.970**	-	0.943	0.945	-	**0.943**	-	0.966
Motorcycles	1	4	0	**5**	-	0	**0**	-	2	7	0	**9**	-	0	0	0	**0**	-	14
% Motorcycles	0.6%	0.3%	0%	**0.4%**	-	0%	**-**	-	0.3%	0.6%	0%	**0.5%**	-	0%	0%	0%	**0%**	-	0.3%
Lights	154	1242	0	**1396**	-	0	**0**	-	770	1111	0	**1881**	-	703	153	0	**856**	-	4133
% Lights	99.4%	98.4%	0%	**98.5%**	-	0%	**-**	-	98.3%	98.7%	0%	**98.5%**	-	99.2%	98.7%	0%	**99.1%**	-	98.6%
Single-Unit Trucks	0	7	0	**7**	-	0	**0**	-	3	2	0	**5**	-	1	2	0	**3**	-	15
% Single-Unit Trucks	0%	0.6%	0%	**0.5%**	-	0%	**-**	-	0.4%	0.2%	0%	**0.3%**	-	0.1%	1.3%	0%	**0.3%**	-	0.4%
Articulated Trucks	0	1	0	**1**	-	0	**0**	-	1	0	0	**1**	-	3	0	0	**3**	-	5
% Articulated Trucks	0%	0.1%	0%	**0.1%**	-	0%	**-**	-	0.1%	0%	0%	**0.1%**	-	0.4%	0%	0%	**0.3%**	-	0.1%
Buses	0	7	0	**7**	-	0	**0**	-	7	3	0	**10**	-	2	0	0	**2**	-	19
% Buses	0%	0.6%	0%	**0.5%**	-	0%	**-**	-	0.9%	0.3%	0%	**0.5%**	-	0.3%	0%	0%	**0.2%**	-	0.5%
Bicycles on Road	0	1	0	**1**	-	0	**0**	-	0	3	0	**3**	-	0	0	0	**0**	-	4
% Bicycles on Road	0%	0.1%	0%	**0.1%**	-	0%	**-**	-	0%	0.3%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (4) Granite Street & Forbes Road TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065004, Location: 42.220493, -71.028199

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Forbes Road						Granite Street (Route 37)						Forbes Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	34	69	7	0	**110**	0	16	3	0	0	**19**	0	7	197	5	0	**209**	0	5	5	10	0	**20**	0	**358**
6:15AM	23	128	4	0	**155**	0	13	3	1	0	**17**	0	1	220	6	0	**227**	0	2	1	11	0	**14**	0	**413**
6:30AM	25	133	3	0	**161**	0	19	4	2	0	**25**	0	0	238	5	0	**243**	0	4	1	20	0	**25**	0	**454**
6:45AM	23	162	7	0	**192**	0	13	6	0	0	**19**	0	3	323	12	0	**338**	0	7	3	25	0	**35**	1	**584**
Hourly Total	105	492	21	0	**618**	0	61	16	3	0	**80**	0	11	978	28	0	**1017**	0	18	10	66	0	**94**	1	**1809**
7:00AM	26	123	11	0	**160**	0	18	1	10	0	**29**	0	1	308	9	0	**318**	0	3	6	32	0	**41**	0	**548**
7:15AM	28	141	10	0	**179**	0	29	7	9	0	**45**	0	3	313	13	0	**329**	0	8	5	51	0	**64**	0	**617**
7:30AM	35	170	9	0	**214**	0	25	8	5	0	**38**	0	1	359	13	0	**373**	0	8	11	60	0	**79**	0	**704**
7:45AM	57	195	10	0	**262**	0	69	17	8	0	**94**	0	0	364	17	0	**381**	0	6	3	81	0	**90**	0	**827**
Hourly Total	146	629	40	0	**815**	0	141	33	32	0	**206**	0	5	1344	52	0	**1401**	0	25	25	224	0	**274**	0	**2696**
8:00AM	44	188	16	0	**248**	0	78	23	4	0	**105**	0	5	326	21	0	**352**	0	11	7	80	0	**98**	0	**803**
8:15AM	63	199	15	0	**277**	0	51	12	4	0	**67**	0	6	303	16	0	**325**	0	7	13	63	0	**83**	0	**752**
8:30AM	61	214	18	0	**293**	0	56	13	6	0	**75**	0	8	269	25	0	**302**	0	7	4	51	0	**62**	0	**732**
8:45AM	87	248	16	0	**351**	0	43	17	5	0	**65**	0	6	246	20	0	**272**	0	12	6	45	0	**63**	0	**751**
Hourly Total	255	849	65	0	**1169**	0	228	65	19	0	**312**	0	25	1144	82	0	**1251**	0	37	30	239	0	**306**	0	**3038**
3:00PM	57	306	72	0	**435**	0	87	22	6	0	**115**	0	12	245	21	0	**278**	0	24	21	68	0	**113**	0	**941**
3:15PM	63	376	77	0	**516**	0	103	14	6	0	**123**	0	6	233	23	0	**262**	0	18	17	46	0	**81**	0	**982**
3:30PM	65	324	85	0	**474**	0	79	8	10	0	**97**	0	3	229	13	0	**245**	0	21	22	55	0	**98**	0	**914**
3:45PM	75	319	88	0	**482**	0	85	17	8	0	**110**	0	11	229	26	0	**266**	0	16	20	51	0	**87**	0	**945**
Hourly Total	260	1325	322	0	**1907**	0	354	61	30	0	**445**	0	32	936	83	0	**1051**	0	79	80	220	0	**379**	0	**3782**
4:00PM	71	358	74	0	**503**	0	88	22	12	0	**122**	0	7	219	19	0	**245**	0	26	18	47	0	**91**	0	**961**
4:15PM	96	361	88	0	**545**	0	76	18	13	0	**107**	0	8	189	27	0	**224**	0	28	17	49	0	**94**	0	**970**
4:30PM	78	338	91	0	**507**	0	61	22	13	0	**96**	0	9	232	27	0	**268**	0	33	13	50	0	**96**	0	**967**
4:45PM	91	340	99	0	**530**	0	88	22	15	1	**126**	0	10	231	30	0	**271**	0	13	22	72	0	**107**	0	**1034**
Hourly Total	336	1397	352	0	**2085**	0	313	84	53	1	**451**	0	34	871	103	0	**1008**	0	100	70	218	0	**388**	0	**3932**
5:00PM	79	329	92	1	**501**	0	75	25	8	0	**108**	0	17	219	23	0	**259**	0	31	30	66	0	**127**	0	**995**
5:15PM	70	322	94	0	**486**	0	90	21	13	0	**124**	1	11	223	28	0	**262**	0	22	16	71	0	**109**	0	**981**
5:30PM	95	329	83	0	**507**	0	90	28	7	0	**125**	0	21	219	33	0	**273**	0	20	17	56	0	**93**	0	**998**
5:45PM	86	304	93	1	**484**	0	79	22	14	0	**115**	0	4	222	19	0	**245**	0	30	19	74	0	**123**	0	**967**
Hourly Total	330	1284	362	2	**1978**	0	334	96	42	0	**472**	1	53	883	103	0	**1039**	0	103	82	267	0	**452**	0	**3941**
2023-05-06 11:00AM	59	292	114	0	**465**	0	61	6	4	0	**71**	0	9	217	14	0	**240**	0	14	16	43	1	**74**	0	**850**
11:15AM	54	339	113	0	**506**	1	97	8	7	0	**112**	0	8	247	25	0	**280**	0	8	11	42	0	**61**	0	**959**
11:30AM	54	275	96	0	**425**	0	97	18	10	0	**125**	0	14	216	20	0	**250**	2	13	19	46	0	**78**	0	**878**
11:45AM	53	292	126	1	**472**	0	97	12	6	0	**115**	0	13	245	24	0	**282**	0	21	10	54	0	**85**	0	**954**
Hourly Total	220	1198	449	1	**1868**	1	352	44	27	0	**423**	0	44	925	83	0	**1052**	2	56	56	185	1	**298**	0	**3641**
12:00PM	63	309	136	2	**510**	0	86	17	7	0	**110**	0	14	262	23	1	**300**	0	21	15	35	0	**71**	1	**991**
12:15PM	63	289	93	0	**445**	0	113	11	13	0	**137**	0	14	267	21	0	**302**	0	24	19	50	0	**93**	0	**977**
12:30PM	75	272	113	2	**462**	0	123	8	9	0	**140**	1	13	275	20	0	**308**	0	20	19	40	0	**79**	0	**989**
12:45PM	61	343	145	1	**550**	0	112	8	12	0	**132**	0	9	246	24	0	**279**	0	16	14	60	0	**90**	0	**1051**
Hourly Total	262	1213	487	5	**1967**	0	434	44	41	0	**519**	1	50	1050	88	1	**1189**	0	81	67	185	0	**333**	1	**4008**
1:00PM	58	306	131	0	**495**	0	140	14	17	0	**171**	0	21	291	23	0	**335**	0	23	18	60	0	**101**	0	**1102**
1:15PM	54	280	145	0	**479**	0	148	19	8	0	**175**	1	13	262	27	0	**302**	0	29	13	67	0	**109**	0	**1065**
1:30PM	65	294	138	0	**497**	0	124	19	14	0	**157**	0	18	306	28	0	**352**	0	21	21	65	0	**107**	0	**1113**
1:45PM	72	304	135	0	**511**	0	153	22	15	0	**190**	0	8	254	37	0	**299**	0	13	13	49	0	**75**	0	**1075**
Hourly Total	249	1184	549	0	**1982**	0	565	74	54	0	**693**	1	60	1113	115	0	**1288**	0	86	65	241	0	**392**	0	**4355**
Total	2163	9571	2647	8	**14389**	1	2782	517	301	1	**3601**	3	314	9244	737	1	**10296**	2	585	485	1845	1	**2916**	2	**31202**
% Approach	15.0%	66.5%	18.4%	0.1%	**-**	-	77.3%	14.4%	8.4%	0%	**-**	-	3.0%	89.8%	7.2%	0%	**-**	-	20.1%	16.6%	63.3%	0%	**-**	-	-
% Total	6.9%	30.7%	8.5%	0%	**46.1%**	-	8.9%	1.7%	1.0%	0%	**11.5%**	-	1.0%	29.6%	2.4%	0%	**33.0%**	-	1.9%	1.6%	5.9%	0%	**9.3%**	-	-
Motorcycles	10	16	2	0	**28**	-	3	0	0	0	**3**	-	0	12	0	0	**12**	-	0	0	10	0	**10**	-	53
% Motorcycles	0.5%	0.2%	0.1%	0%	**0.2%**	-	0.1%	0%	0%	0%	**0.1%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.5%	0%	**0.3%**	-	0.2%
Lights	2097	9231	2634	8	**13970**	-	2758	513	294	1	**3566**	-	311	8903	727	1	**9942**	-	570	484	1786	1	**2841**	-	30319
% Lights	96.9%	96.4%	99.5%	100%	**97.1%**	-	99.1%	99.2%	97.7%	100%	**99.0%**	-	99.0%	96.3%	98.6%	100%	**96.6%**	-	97.4%	99.8%	96.8%	100%	**97.4%**	-	97.2%
Single-Unit Trucks	22	152	9	0	**183**	-	12	2	2	0	**16**	-	1	171	9	0	**181**	-	11	1	24	0	**36**	-	416
% Single-Unit Trucks	1.0%	1.6%	0.3%	0%	**1.3%**	-	0.4%	0.4%	0.7%	0%	**0.4%**	-	0.3%	1.8%	1.2%	0%	**1.8%**	-	1.9%	0.2%	1.3%	0%	**1.2%**	-	1.3%
Articulated Trucks	10	93	0	0	**103**	-	2	0	0	0	**2**	-	0	93	0	0	**93**	-	3	0	5	0	**8**	-	206
% Articulated Trucks	0.5%	1.0%	0%	0%	**0.7%**	-	0.1%	0%	0%	0%	**0.1%**	-	0%	1.0%	0%	0%	**0.9%**	-	0.5%	0%	0.3%	0%	**0.3%**	-	0.7%
Buses	21	79	2	0	**102**	-	7	2	5	0	**14**	-	2	62	1	0	**65**	-	1	0	19	0	**20**	-	201
% Buses	1.0%	0.8%	0.1%	0%	**0.7%**	-	0.3%	0.4%	1.7%	0%	**0.4%**	-	0.6%	0.7%	0.1%	0%	**0.6%**	-	0.2%	0%	1.0%	0%	**0.7%**	-	0.6%
Bicycles on Road	3	0	0	0	**3**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	1	0	**1**	-	7
% Bicycles on Road	0.1%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.1%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	

Leg	Granite Street (Route 37)						Forbes Road						Granite Street (Route 37)						Forbes Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	66.7%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (4) Granite Street & Forbes Road TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065004, Location: 42.220493, -71.028199

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Forbes Road						Granite Street (Route 37)						Forbes Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	57	195	10	0	**262**	0	69	17	8	0	**94**	0	0	364	17	0	**381**	0	6	3	81	0	**90**	0	**827**
8:00AM	44	188	16	0	**248**	0	78	23	4	0	**105**	0	5	326	21	0	**352**	0	11	7	80	0	**98**	0	**803**
8:15AM	63	199	15	0	**277**	0	51	12	4	0	**67**	0	6	303	16	0	**325**	0	7	13	63	0	**83**	0	**752**
8:30AM	61	214	18	0	**293**	0	56	13	6	0	**75**	0	8	269	25	0	**302**	0	7	4	51	0	**62**	0	**732**
Total	225	796	59	0	**1080**	0	254	65	22	0	**341**	0	19	1262	79	0	**1360**	0	31	27	275	0	**333**	0	**3114**
% Approach	20.8%	73.7%	5.5%	0%	**-**	-	74.5%	19.1%	6.5%	0%	**-**	-	1.4%	92.8%	5.8%	0%	**-**	-	9.3%	8.1%	82.6%	0%	**-**	-	**-**
% Total	7.2%	25.6%	1.9%	0%	**34.7%**	-	8.2%	2.1%	0.7%	0%	**11.0%**	-	0.6%	40.5%	2.5%	0%	**43.7%**	-	1.0%	0.9%	8.8%	0%	**10.7%**	-	**-**
PHF	0.893	0.930	0.819	-	**0.922**	-	0.814	0.707	0.688	-	**0.812**	-	0.594	0.867	0.790	-	**0.892**	-	0.705	0.519	0.849	-	**0.849**	-	0.941
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	213	735	58	0	**1006**	-	251	63	21	0	**335**	-	18	1190	78	0	**1286**	-	30	27	263	0	**320**	-	2947
% Lights	94.7%	92.3%	98.3%	0%	**93.1%**	-	98.8%	96.9%	95.5%	0%	**98.2%**	-	94.7%	94.3%	98.7%	0%	**94.6%**	-	96.8%	100%	95.6%	0%	**96.1%**	-	94.6%
Single-Unit Trucks	7	30	0	0	**37**	-	2	2	0	0	**4**	-	1	55	1	0	**57**	-	1	0	8	0	**9**	-	107
% Single-Unit Trucks	3.1%	3.8%	0%	0%	**3.4%**	-	0.8%	3.1%	0%	0%	**1.2%**	-	5.3%	4.4%	1.3%	0%	**4.2%**	-	3.2%	0%	2.9%	0%	**2.7%**	-	3.4%
Articulated Trucks	2	13	0	0	**15**	-	0	0	0	0	**0**	-	0	13	0	0	**13**	-	0	0	1	0	**1**	-	29
% Articulated Trucks	0.9%	1.6%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	0%	0%	0.4%	0%	**0.3%**	-	0.9%
Buses	3	18	1	0	**22**	-	1	0	1	0	**2**	-	0	4	0	0	**4**	-	0	0	3	0	**3**	-	31
% Buses	1.3%	2.3%	1.7%	0%	**2.0%**	-	0.4%	0%	4.5%	0%	**0.6%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	1.1%	0%	**0.9%**	-	1.0%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (4) Granite Street & Forbes Road TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065004, Location: 42.220493, -71.028199

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Forbes Road						Granite Street (Route 37)						Forbes Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:45PM	91	340	99	0	**530**	0	88	22	15	1	**126**	0	10	231	30	0	**271**	0	13	22	72	0	**107**	0	**1034**
5:00PM	79	329	92	1	**501**	0	75	25	8	0	**108**	0	17	219	23	0	**259**	0	31	30	66	0	**127**	0	**995**
5:15PM	70	322	94	0	**486**	0	90	21	13	0	**124**	1	11	223	28	0	**262**	0	22	16	71	0	**109**	0	**981**
5:30PM	95	329	83	0	**507**	0	90	28	7	0	**125**	0	21	219	33	0	**273**	0	20	17	56	0	**93**	0	**998**
Total	335	1320	368	1	**2024**	0	343	96	43	1	**483**	1	59	892	114	0	**1065**	0	86	85	265	0	**436**	0	**4008**
% Approach	16.6%	65.2%	18.2%	0%	**-**	-	71.0%	19.9%	8.9%	0.2%	**-**	-	5.5%	83.8%	10.7%	0%	**-**	-	19.7%	19.5%	60.8%	0%	**-**	-	-
% Total	8.4%	32.9%	9.2%	0%	**50.5%**	-	8.6%	2.4%	1.1%	0%	**12.1%**	-	1.5%	22.3%	2.8%	0%	**26.6%**	-	2.1%	2.1%	6.6%	0%	**10.9%**	-	-
PHF	0.882	0.971	0.929	0.250	**0.955**	-	0.953	0.857	0.717	0.250	**0.958**	-	0.702	0.965	0.864	-	**0.975**	-	0.694	0.708	0.920	-	**0.858**	-	0.969
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	328	1281	365	1	**1975**	-	341	96	43	1	**481**	-	59	878	114	0	**1051**	-	86	85	260	0	**431**	-	3938
% Lights	97.9%	97.0%	99.2%	100%	**97.6%**	-	99.4%	100%	100%	100%	**99.6%**	-	100%	98.4%	100%	0%	**98.7%**	-	100%	100%	98.1%	0%	**98.9%**	-	98.3%
Single-Unit Trucks	3	11	2	0	**16**	-	2	0	0	0	**2**	-	0	7	0	0	**7**	-	0	0	2	0	**2**	-	27
% Single-Unit Trucks	0.9%	0.8%	0.5%	0%	**0.8%**	-	0.6%	0%	0%	0%	**0.4%**	-	0%	0.8%	0%	0%	**0.7%**	-	0%	0%	0.8%	0%	**0.5%**	-	0.7%
Articulated Trucks	1	16	0	0	**17**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	1	0	**1**	-	22
% Articulated Trucks	0.3%	1.2%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0.4%	0%	**0.2%**	-	0.5%
Buses	3	12	1	0	**16**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	2	0	**2**	-	21
% Buses	0.9%	0.9%	0.3%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0.8%	0%	**0.5%**	-	0.5%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (4) Granite Street & Forbes Road TMC - TMC

Sat May 6, 2023

Midday Peak (WKND), PM Peak (WKND) (May 06 2023 1PM - 2 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1065004, Location: 42.220493, -71.028199

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						Forbes Road						Granite Street (Route 37)						Forbes Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	58	306	131	0	**495**	0	140	14	17	0	**171**	0	21	291	23	0	**335**	0	23	18	60	0	**101**	0	**1102**
1:15PM	54	280	145	0	**479**	0	148	19	8	0	**175**	1	13	262	27	0	**302**	0	29	13	67	0	**109**	0	**1065**
1:30PM	65	294	138	0	**497**	0	124	19	14	0	**157**	0	18	306	28	0	**352**	0	21	21	65	0	**107**	0	**1113**
1:45PM	72	304	135	0	**511**	0	153	22	15	0	**190**	0	8	254	37	0	**299**	0	13	13	49	0	**75**	0	**1075**
Total	249	1184	549	0	**1982**	0	565	74	54	0	**693**	1	60	1113	115	0	**1288**	0	86	65	241	0	**392**	0	**4355**
% Approach	12.6%	59.7%	27.7%	0%	**-**	-	81.5%	10.7%	7.8%	0%	**-**	-	4.7%	86.4%	8.9%	0%	**-**	-	21.9%	16.6%	61.5%	0%	**-**	-	-
% Total	5.7%	27.2%	12.6%	0%	**45.5%**	-	13.0%	1.7%	1.2%	0%	**15.9%**	-	1.4%	25.6%	2.6%	0%	**29.6%**	-	2.0%	1.5%	5.5%	0%	**9.0%**	-	-
PHF	0.861	0.967	0.947	-	**0.969**	-	0.923	0.841	0.794	-	**0.912**	-	0.714	0.914	0.777	-	**0.919**	-	0.741	0.774	0.899	-	**0.899**	-	0.979
Motorcycles	0	2	0	0	**2**	-	2	0	0	0	**2**	-	0	6	0	0	**6**	-	0	0	2	0	**2**	-	12
% Motorcycles	0%	0.2%	0%	0%	**0.1%**	-	0.4%	0%	0%	0%	**0.3%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0.8%	0%	**0.5%**	-	0.3%
Lights	245	1166	546	0	**1957**	-	561	74	54	0	**689**	-	58	1093	115	0	**1266**	-	85	65	237	0	**387**	-	4299
% Lights	98.4%	98.5%	99.5%	0%	**98.7%**	-	99.3%	100%	100%	0%	**99.4%**	-	96.7%	98.2%	100%	0%	**98.3%**	-	98.8%	100%	98.3%	0%	**98.7%**	-	98.7%
Single-Unit Trucks	0	5	3	0	**8**	-	1	0	0	0	**1**	-	0	3	0	0	**3**	-	1	0	0	0	**1**	-	13
% Single-Unit Trucks	0%	0.4%	0.5%	0%	**0.4%**	-	0.2%	0%	0%	0%	**0.1%**	-	0%	0.3%	0%	0%	**0.2%**	-	1.2%	0%	0%	0%	**0.3%**	-	0.3%
Articulated Trucks	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	7
% Articulated Trucks	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	3	6	0	0	**9**	-	1	0	0	0	**1**	-	2	7	0	0	**9**	-	0	0	2	0	**2**	-	21
% Buses	1.2%	0.5%	0%	0%	**0.5%**	-	0.2%	0%	0%	0%	**0.1%**	-	3.3%	0.6%	0%	0%	**0.7%**	-	0%	0%	0.8%	0%	**0.5%**	-	0.5%
Bicycles on Road	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0.4%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (5) Granite @ South Shore Plaza TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065005, Location: 42.218519, -71.025707

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)						South Shore Plaza Road						Granite Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	0	68	11	3	**82**	0	2	0	3	0	**5**	0	3	219	0	0	**222**	0	0	0	0	0	**0**	0	**309**
6:15AM	0	105	17	1	**123**	0	2	0	3	0	**5**	0	1	212	0	0	**213**	0	0	0	1	0	**1**	0	**342**
6:30AM	1	129	10	0	**140**	0	0	0	1	0	**1**	0	8	244	0	0	**252**	0	0	0	1	0	**1**	0	**394**
6:45AM	0	157	15	0	**172**	0	6	0	0	0	**6**	0	11	319	0	0	**330**	0	0	0	0	0	**0**	0	**508**
Hourly Total	1	459	53	4	**517**	0	10	0	7	0	**17**	0	23	994	0	0	**1017**	0	0	0	2	0	**2**	0	**1553**
7:00AM	0	125	7	1	**133**	0	3	0	6	0	**9**	0	9	323	0	0	**332**	0	0	0	0	0	**0**	1	**474**
7:15AM	0	133	17	2	**152**	0	8	0	2	0	**10**	0	13	319	0	0	**332**	0	0	0	0	0	**0**	0	**494**
7:30AM	0	158	15	1	**174**	0	2	0	3	0	**5**	0	8	362	0	0	**370**	0	0	0	0	0	**0**	0	**549**
7:45AM	0	193	29	1	**223**	0	6	0	2	0	**8**	0	10	340	0	0	**350**	0	0	0	0	0	**0**	0	**581**
Hourly Total	0	609	68	5	**682**	0	19	0	13	0	**32**	0	40	1344	0	0	**1384**	0	0	0	0	0	**0**	1	**2098**
8:00AM	0	169	27	1	**197**	0	14	0	6	0	**20**	0	16	369	0	0	**385**	0	0	0	0	0	**0**	0	**602**
8:15AM	0	178	33	2	**213**	0	11	0	9	0	**20**	0	14	305	0	0	**319**	0	0	0	0	0	**0**	1	**552**
8:30AM	0	185	42	2	**229**	0	10	0	9	0	**19**	1	16	335	0	0	**351**	1	0	0	0	0	**0**	0	**599**
8:45AM	0	222	54	10	**286**	0	13	0	18	0	**31**	0	17	244	0	0	**261**	1	0	0	0	0	**0**	1	**578**
Hourly Total	0	754	156	15	**925**	0	48	0	42	0	**90**	1	63	1253	0	0	**1316**	2	0	0	0	0	**0**	2	**2331**
3:00PM	0	247	79	5	**331**	0	99	0	41	0	**140**	0	23	181	0	0	**204**	0	0	0	1	0	**1**	0	**676**
3:15PM	0	318	87	1	**406**	0	61	0	29	0	**90**	0	22	176	0	0	**198**	0	0	0	0	0	**0**	0	**694**
3:30PM	0	293	81	0	**374**	0	77	0	32	1	**110**	0	30	173	0	0	**203**	0	0	0	0	0	**0**	0	**687**
3:45PM	0	281	57	2	**340**	0	78	0	34	0	**112**	0	42	173	0	0	**215**	0	0	0	0	0	**0**	0	**667**
Hourly Total	0	1139	304	8	**1451**	0	315	0	136	1	**452**	0	117	703	0	0	**820**	0	0	0	1	0	**1**	0	**2724**
4:00PM	0	293	91	1	**385**	0	72	0	33	0	**105**	0	40	165	0	0	**205**	0	0	0	1	0	**1**	0	**696**
4:15PM	0	283	95	2	**380**	0	61	0	37	0	**98**	0	38	162	0	0	**200**	0	0	0	0	0	**0**	0	**678**
4:30PM	0	296	82	1	**379**	0	83	0	30	1	**114**	1	30	168	0	0	**198**	0	0	0	0	0	**0**	0	**691**
4:45PM	1	242	63	8	**314**	0	68	0	30	0	**98**	0	47	195	0	0	**242**	0	1	0	0	0	**1**	0	**655**
Hourly Total	1	1114	331	12	**1458**	0	284	0	130	1	**415**	1	155	690	0	0	**845**	0	1	0	1	0	**2**	0	**2720**
5:00PM	0	294	87	7	**388**	0	58	0	46	0	**104**	0	33	221	0	0	**254**	0	0	0	0	0	**0**	0	**746**
5:15PM	0	275	67	7	**349**	0	96	0	40	1	**137**	0	41	188	0	0	**229**	0	0	0	0	0	**0**	0	**715**
5:30PM	0	287	83	1	**371**	0	72	0	33	0	**105**	0	36	183	0	0	**219**	0	0	0	0	0	**0**	0	**695**
5:45PM	0	264	92	2	**358**	0	64	0	42	0	**106**	0	31	184	0	0	**215**	0	0	0	0	0	**0**	0	**679**
Hourly Total	0	1120	329	17	**1466**	0	290	0	161	1	**452**	0	141	776	0	0	**917**	0	0	0	0	0	**0**	0	**2835**
2023-05-06 11:00AM	0	172	140	4	**316**	0	49	0	25	0	**74**	0	39	189	0	0	**228**	0	0	0	0	0	**0**	1	**618**
11:15AM	0	207	135	2	**344**	0	63	0	32	0	**95**	0	44	208	0	0	**252**	0	0	0	0	0	**0**	2	**691**
11:30AM	0	173	139	2	**314**	0	76	0	32	0	**108**	0	45	185	0	0	**230**	1	0	0	0	0	**0**	1	**652**
11:45AM	0	141	128	3	**272**	0	76	0	36	2	**114**	0	56	205	0	0	**261**	0	0	0	0	0	**0**	0	**647**
Hourly Total	0	693	542	11	**1246**	0	264	0	125	2	**391**	0	184	787	0	0	**971**	1	0	0	0	0	**0**	4	**2608**
12:00PM	0	202	152	3	**357**	0	80	0	45	0	**125**	0	64	202	0	0	**266**	0	0	0	0	0	**0**	1	**748**
12:15PM	0	203	118	3	**324**	0	88	0	36	2	**126**	0	52	204	0	2	**258**	0	0	0	0	0	**0**	0	**708**
12:30PM	0	175	119	4	**298**	0	77	0	38	0	**115**	0	56	201	0	0	**257**	0	0	0	0	0	**0**	0	**670**
12:45PM	0	198	154	2	**354**	0	97	0	42	0	**139**	0	83	187	0	1	**271**	3	0	0	0	0	**0**	3	**764**
Hourly Total	0	778	543	12	**1333**	0	342	0	161	2	**505**	0	255	794	0	3	**1052**	3	0	0	0	0	**0**	4	**2890**
1:00PM	0	213	127	4	**344**	0	94	0	39	1	**134**	0	54	214	0	0	**268**	0	0	0	0	0	**0**	0	**746**
1:15PM	0	156	160	3	**319**	0	104	0	43	1	**148**	0	67	206	0	0	**273**	1	0	0	0	0	**0**	0	**740**
1:30PM	0	185	144	4	**333**	0	122	0	44	0	**166**	0	62	191	0	0	**253**	0	0	0	0	0	**0**	0	**752**
1:45PM	0	172	142	6	**320**	0	104	0	48	0	**152**	0	58	199	0	0	**257**	0	0	0	0	0	**0**	0	**729**
Hourly Total	0	726	573	17	**1316**	0	424	0	174	2	**600**	0	241	810	0	0	**1051**	1	0	0	0	0	**0**	0	**2967**
Total	2	7392	2899	101	**10394**	0	1996	0	949	9	**2954**	2	1219	8151	0	3	**9373**	7	1	0	4	0	**5**	11	**22726**
% Approach	0%	71.1%	27.9%	1.0%	**-**	-	67.6%	0%	32.1%	0.3%	**-**	-	13.0%	87.0%	0%	0%	**-**	-	20.0%	0%	80.0%	0%	**-**	-	-
% Total	0%	32.5%	12.8%	0.4%	**45.7%**	-	8.8%	0%	4.2%	0%	**13.0%**	-	5.4%	35.9%	0%	0%	**41.2%**	-	0%	0%	0%	0%	**0%**	-	-
Motorcycles	0	9	3	0	**12**	-	2	0	2	0	**4**	-	1	12	0	0	**13**	-	0	0	0	0	**0**	-	29
% Motorcycles	0%	0.1%	0.1%	0%	**0.1%**	-	0.1%	0%	0.2%	0%	**0.1%**	-	0.1%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Lights	2	7071	2880	100	**10053**	-	1970	0	920	9	**2899**	-	1202	7823	0	3	**9028**	-	1	0	4	0	**5**	-	21985
% Lights	100%	95.7%	99.3%	99.0%	**96.7%**	-	98.7%	0%	96.9%	100%	**98.1%**	-	98.6%	96.0%	0%	100%	**96.3%**	-	100%	0%	100%	0%	**100%**	-	96.7%
Single-Unit Trucks	0	140	11	0	**151**	-	7	0	4	0	**11**	-	15	171	0	0	**186**	-	0	0	0	0	**0**	-	348
% Single-Unit Trucks	0%	1.9%	0.4%	0%	**1.5%**	-	0.4%	0%	0.4%	0%	**0.4%**	-	1.2%	2.1%	0%	0%	**2.0%**	-	0%	0%	0%	0%	**0%**	-	1.5%
Articulated Trucks	0	94	2	0	**96**	-	1	0	0	0	**1**	-	1	92	0	0	**93**	-	0	0	0	0	**0**	-	190
% Articulated Trucks	0%	1.3%	0.1%	0%	**0.9%**	-	0.1%	0%	0%	0%	**0%**	-	0.1%	1.1%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**0%**	-	0.8%

Leg	Granite Street (Route 37)						South Shore Plaza Road						Granite Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Buses	0	77	3	1	**81**	-	16	0	23	0	**39**	-	0	50	0	0	**50**	-	0	0	0	0	**0**	-	170
% Buses	0%	1.0%	0.1%	1.0%	**0.8%**	-	0.8%	0%	2.4%	0%	**1.3%**	-	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.7%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	4
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	11	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (5) Granite @ South Shore Plaza TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065005, Location: 42.218519, -71.025707

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	0	193	29	1	**223**	0	6	0	2	0	**8**	0	10	340	0	0	**350**	0	0	0	0	0	**0**	0	**581**
8:00AM	0	169	27	1	**197**	0	14	0	6	0	**20**	0	16	369	0	0	**385**	0	0	0	0	0	**0**	0	**602**
8:15AM	0	178	33	2	**213**	0	11	0	9	0	**20**	0	14	305	0	0	**319**	0	0	0	0	0	**0**	1	**552**
8:30AM	0	185	42	2	**229**	0	10	0	9	0	**19**	1	16	335	0	0	**351**	1	0	0	0	0	**0**	0	**599**
Total	0	725	131	6	**862**	0	41	0	26	0	**67**	1	56	1349	0	0	**1405**	1	0	0	0	0	**0**	1	**2334**
% Approach	0%	84.1%	15.2%	0.7%	**-**	-	61.2%	0%	38.8%	0%	**-**	-	4.0%	96.0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	31.1%	5.6%	0.3%	**36.9%**	-	1.8%	0%	1.1%	0%	**2.9%**	-	2.4%	57.8%	0%	0%	**60.2%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.939	0.780	0.750	**0.941**	-	0.732	-	0.722	-	**0.838**	-	0.875	0.914	-	-	**0.912**	-	-	-	-	-	**-**	-	0.969
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Lights	0	666	128	6	**800**	-	37	0	22	0	**59**	-	53	1281	0	0	**1334**	-	0	0	0	0	**0**	-	2193
% Lights	0%	91.9%	97.7%	100%	**92.8%**	-	90.2%	0%	84.6%	0%	**88.1%**	-	94.6%	95.0%	0%	0%	**94.9%**	-	0%	0%	0%	0%	**-**	-	94.0%
Single-Unit Trucks	0	27	2	0	**29**	-	1	0	2	0	**3**	-	3	54	0	0	**57**	-	0	0	0	0	**0**	-	89
% Single-Unit Trucks	0%	3.7%	1.5%	0%	**3.4%**	-	2.4%	0%	7.7%	0%	**4.5%**	-	5.4%	4.0%	0%	0%	**4.1%**	-	0%	0%	0%	0%	**-**	-	3.8%
Articulated Trucks	0	13	1	0	**14**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	0	0	0	0	**0**	-	26
% Articulated Trucks	0%	1.8%	0.8%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	1.1%
Buses	0	19	0	0	**19**	-	3	0	2	0	**5**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	26
% Buses	0%	2.6%	0%	0%	**2.2%**	-	7.3%	0%	7.7%	0%	**7.5%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	1.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (5) Granite @ South Shore Plaza TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 5PM - 6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065005, Location: 42.218519, -71.025707

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 5:00PM	0	294	87	7	**388**	0	58	0	46	0	**104**	0	33	221	0	0	**254**	0	0	0	0	0	**0**	0	**746**
5:15PM	0	275	67	7	**349**	0	96	0	40	1	**137**	0	41	188	0	0	**229**	0	0	0	0	0	**0**	0	**715**
5:30PM	0	287	83	1	**371**	0	72	0	33	0	**105**	0	36	183	0	0	**219**	0	0	0	0	0	**0**	0	**695**
5:45PM	0	264	92	2	**358**	0	64	0	42	0	**106**	0	31	184	0	0	**215**	0	0	0	0	0	**0**	0	**679**
Total	0	1120	329	17	**1466**	0	290	0	161	1	**452**	0	141	776	0	0	**917**	0	0	0	0	0	**0**	0	**2835**
% Approach	0%	76.4%	22.4%	1.2%	**-**	-	64.2%	0%	35.6%	0.2%	**-**	-	15.4%	84.6%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	39.5%	11.6%	0.6%	**51.7%**	-	10.2%	0%	5.7%	0%	**15.9%**	-	5.0%	27.4%	0%	0%	**32.3%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.952	0.894	0.607	**0.945**	-	0.755	-	0.875	0.250	**0.825**	-	0.860	0.878	-	-	**0.903**	-	-	-	-	-	**-**	-	0.950
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Lights	0	1082	327	17	**1426**	-	289	0	156	1	**446**	-	140	759	0	0	**899**	-	0	0	0	0	**0**	-	2771
% Lights	0%	96.6%	99.4%	100%	**97.3%**	-	99.7%	0%	96.9%	100%	**98.7%**	-	99.3%	97.8%	0%	0%	**98.0%**	-	0%	0%	0%	0%	**-**	-	97.7%
Single-Unit Trucks	0	6	0	0	**6**	-	0	0	0	0	**0**	-	1	9	0	0	**10**	-	0	0	0	0	**0**	-	16
% Single-Unit Trucks	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.7%	1.2%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**-**	-	0.6%
Articulated Trucks	0	17	0	0	**17**	-	0	0	0	0	**0**	-	0	7	0	0	**7**	-	0	0	0	0	**0**	-	24
% Articulated Trucks	0%	1.5%	0%	0%	**1.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**-**	-	0.8%
Buses	0	15	2	0	**17**	-	1	0	5	0	**6**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	24
% Buses	0%	1.3%	0.6%	0%	**1.2%**	-	0.3%	0%	3.1%	0%	**1.3%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0.8%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (5) Granite @ South Shore Plaza TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:45PM - 1:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065005, Location: 42.218519, -71.025707

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:45PM	0	198	154	2	**354**	0	97	0	42	0	**139**	0	83	187	0	1	**271**	3	0	0	0	0	**0**	3	**764**
1:00PM	0	213	127	4	**344**	0	94	0	39	1	**134**	0	54	214	0	0	**268**	0	0	0	0	0	**0**	0	**746**
1:15PM	0	156	160	3	**319**	0	104	0	43	1	**148**	0	67	206	0	0	**273**	1	0	0	0	0	**0**	0	**740**
1:30PM	0	185	144	4	**333**	0	122	0	44	0	**166**	0	62	191	0	0	**253**	0	0	0	0	0	**0**	0	**752**
Total	0	752	585	13	**1350**	0	417	0	168	2	**587**	0	266	798	0	1	**1065**	4	0	0	0	0	**0**	3	**3002**
% Approach	0%	55.7%	43.3%	1.0%	**-**	-	71.0%	0%	28.6%	0.3%	**-**	-	25.0%	74.9%	0%	0.1%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	25.0%	19.5%	0.4%	**45.0%**	-	13.9%	0%	5.6%	0.1%	**19.6%**	-	8.9%	26.6%	0%	0%	**35.5%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.883	0.914	0.813	**0.953**	-	0.855	-	0.955	0.500	**0.884**	-	0.801	0.929	-	0.250	**0.973**	-	-	-	-	-	**-**	-	0.983
Motorcycles	0	2	0	0	**2**	-	2	0	1	0	**3**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	8
% Motorcycles	0%	0.3%	0%	0%	**0.1%**	-	0.5%	0%	0.6%	0%	**0.5%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0.3%
Lights	0	735	585	12	**1332**	-	412	0	164	2	**578**	-	264	781	0	1	**1046**	-	0	0	0	0	**0**	-	2956
% Lights	0%	97.7%	100%	92.3%	**98.7%**	-	98.8%	0%	97.6%	100%	**98.5%**	-	99.2%	97.9%	0%	100%	**98.2%**	-	0%	0%	0%	0%	**-**	-	98.5%
Single-Unit Trucks	0	6	0	0	**6**	-	1	0	0	0	**1**	-	2	3	0	0	**5**	-	0	0	0	0	**0**	-	12
% Single-Unit Trucks	0%	0.8%	0%	0%	**0.4%**	-	0.2%	0%	0%	0%	**0.2%**	-	0.8%	0.4%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0.4%
Articulated Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	6
% Articulated Trucks	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0.2%
Buses	0	5	0	1	**6**	-	2	0	3	0	**5**	-	0	6	0	0	**6**	-	0	0	0	0	**0**	-	17
% Buses	0%	0.7%	0%	7.7%	**0.4%**	-	0.5%	0%	1.8%	0%	**0.9%**	-	0%	0.8%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0.6%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (5) Granite @ South Shore Plaza TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065005, Location: 42.218519, -71.025707

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	0	213	127	4	**344**	0	94	0	39	1	**134**	0	54	214	0	0	**268**	0	0	0	0	0	**0**	0	**746**
1:15PM	0	156	160	3	**319**	0	104	0	43	1	**148**	0	67	206	0	0	**273**	1	0	0	0	0	**0**	0	**740**
1:30PM	0	185	144	4	**333**	0	122	0	44	0	**166**	0	62	191	0	0	**253**	0	0	0	0	0	**0**	0	**752**
1:45PM	0	172	142	6	**320**	0	104	0	48	0	**152**	0	58	199	0	0	**257**	0	0	0	0	0	**0**	0	**729**
Total	0	726	573	17	**1316**	0	424	0	174	2	**600**	0	241	810	0	0	**1051**	1	0	0	0	0	**0**	0	**2967**
% Approach	0%	55.2%	43.5%	1.3%	**-**	-	70.7%	0%	29.0%	0.3%	**-**	-	22.9%	77.1%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	24.5%	19.3%	0.6%	**44.4%**	-	14.3%	0%	5.9%	0.1%	**20.2%**	-	8.1%	27.3%	0%	0%	**35.4%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.852	0.895	0.708	**0.956**	-	0.869	-	0.906	0.500	**0.904**	-	0.899	0.944	-	-	**0.961**	-	-	-	-	-	**-**	-	0.988
Motorcycles	0	2	0	0	**2**	-	1	0	0	0	**1**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	8
% Motorcycles	0%	0.3%	0%	0%	**0.2%**	-	0.2%	0%	0%	0%	**0.2%**	-	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0.3%
Lights	0	712	573	16	**1301**	-	420	0	172	2	**594**	-	239	792	0	0	**1031**	-	0	0	0	0	**0**	-	2926
% Lights	0%	98.1%	100%	94.1%	**98.9%**	-	99.1%	0%	98.9%	100%	**99.0%**	-	99.2%	97.8%	0%	0%	**98.1%**	-	0%	0%	0%	0%	**-**	-	98.6%
Single-Unit Trucks	0	3	0	0	**3**	-	1	0	0	0	**1**	-	2	3	0	0	**5**	-	0	0	0	0	**0**	-	9
% Single-Unit Trucks	0%	0.4%	0%	0%	**0.2%**	-	0.2%	0%	0%	0%	**0.2%**	-	0.8%	0.4%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0.3%
Articulated Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	6
% Articulated Trucks	0%	0.6%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0.2%
Buses	0	5	0	1	**6**	-	2	0	2	0	**4**	-	0	6	0	0	**6**	-	0	0	0	0	**0**	-	16
% Buses	0%	0.7%	0%	5.9%	**0.5%**	-	0.5%	0%	1.1%	0%	**0.7%**	-	0%	0.7%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0.5%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (6) Granite @ Kindercare TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065009, Location: 42.214762, -71.022019

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Kindercare Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 6:00AM	0	76	2	0	**78**	0	1	0	0	0	**1**	0	6	206	1	0	**213**	0	0	0	0	0	**0**	0	**292**
6:15AM	1	104	3	0	**108**	0	2	1	1	0	**4**	0	5	227	1	0	**233**	0	0	1	0	0	**1**	0	**346**
6:30AM	4	128	4	0	**136**	0	1	0	2	0	**3**	0	8	241	1	0	**250**	0	0	0	3	0	**3**	0	**392**
6:45AM	1	149	3	0	**153**	0	0	0	0	0	**0**	0	12	318	4	0	**334**	0	3	0	2	0	**5**	0	**492**
Hourly Total	6	457	12	0	**475**	0	4	1	3	0	**8**	0	31	992	7	0	**1030**	0	3	1	5	0	**9**	0	**1522**
7:00AM	3	127	4	0	**134**	0	0	1	1	0	**2**	0	20	317	2	0	**339**	0	1	0	3	0	**4**	1	**479**
7:15AM	4	137	2	0	**143**	0	1	0	2	0	**3**	0	12	329	2	0	**343**	0	2	0	3	0	**5**	0	**494**
7:30AM	4	166	3	0	**173**	0	2	0	1	0	**3**	0	15	348	5	0	**368**	0	3	0	5	0	**8**	0	**552**
7:45AM	1	182	8	0	**191**	0	2	0	3	0	**5**	0	36	383	6	0	**425**	0	2	0	5	0	**7**	0	**628**
Hourly Total	12	612	17	0	**641**	0	5	1	7	0	**13**	0	83	1377	15	0	**1475**	0	8	0	16	0	**24**	1	**2153**
8:00AM	5	169	11	0	**185**	0	0	0	2	0	**2**	0	33	352	3	0	**388**	0	1	0	3	0	**4**	0	**579**
8:15AM	3	172	9	0	**184**	0	2	1	13	0	**16**	0	37	306	3	0	**346**	0	1	2	6	0	**9**	0	**555**
8:30AM	4	166	17	0	**187**	0	6	0	8	0	**14**	0	38	315	5	0	**358**	0	2	1	2	0	**5**	1	**564**
8:45AM	9	214	18	0	**241**	0	4	1	7	0	**12**	0	40	242	4	0	**286**	0	5	0	3	0	**8**	0	**547**
Hourly Total	21	721	55	0	**797**	0	12	2	30	0	**44**	0	148	1215	15	0	**1378**	0	9	3	14	0	**26**	1	**2245**
3:00PM	0	293	5	0	**298**	0	11	0	29	0	**40**	0	24	205	1	0	**230**	0	0	0	1	0	**1**	0	**569**
3:15PM	0	303	9	0	**312**	0	15	0	35	0	**50**	0	34	170	1	0	**205**	0	1	0	1	0	**2**	0	**569**
3:30PM	3	299	3	0	**305**	0	12	0	30	0	**42**	0	31	193	1	0	**225**	0	2	0	1	0	**3**	0	**575**
3:45PM	4	328	6	0	**338**	0	12	0	26	0	**38**	0	29	214	2	0	**245**	0	4	0	0	0	**4**	0	**625**
Hourly Total	7	1223	23	0	**1253**	0	50	0	120	0	**170**	0	118	782	5	0	**905**	0	7	0	3	0	**10**	0	**2338**
4:00PM	2	301	4	0	**307**	0	23	1	37	0	**61**	0	40	190	6	0	**236**	0	5	1	3	0	**9**	0	**613**
4:15PM	5	286	1	0	**292**	0	12	0	26	0	**38**	1	29	175	0	0	**204**	0	0	1	0	0	**1**	0	**535**
4:30PM	7	334	4	0	**345**	0	20	0	27	0	**47**	0	35	187	5	0	**227**	0	2	0	4	0	**6**	1	**625**
4:45PM	8	297	3	0	**308**	0	28	1	38	0	**67**	1	22	218	7	0	**247**	0	6	0	6	0	**12**	0	**634**
Hourly Total	22	1218	12	0	**1252**	0	83	2	128	0	**213**	2	126	770	18	0	**914**	0	13	2	13	0	**28**	1	**2407**
5:00PM	7	318	4	0	**329**	0	28	0	41	0	**69**	0	30	207	4	0	**241**	0	7	0	12	0	**19**	0	**658**
5:15PM	7	353	0	0	**360**	0	16	0	33	0	**49**	0	40	222	3	0	**265**	0	4	1	5	0	**10**	0	**684**
5:30PM	5	303	4	0	**312**	0	17	0	30	0	**47**	0	34	204	2	0	**240**	0	4	1	4	0	**9**	0	**608**
5:45PM	3	295	3	0	**301**	0	16	0	26	0	**42**	2	31	211	1	0	**243**	0	1	2	4	0	**7**	0	**593**
Hourly Total	22	1269	11	0	**1302**	0	77	0	130	0	**207**	2	135	844	10	0	**989**	0	16	4	25	0	**45**	0	**2543**
2023-05-06 11:00AM	0	188	6	0	**194**	0	5	0	13	0	**18**	0	42	227	0	0	**269**	0	0	0	0	0	**0**	2	**481**
11:15AM	0	237	11	0	**248**	0	12	0	17	0	**29**	1	48	237	0	0	**285**	0	0	0	0	0	**0**	0	**562**
11:30AM	1	189	6	0	**196**	0	10	0	32	0	**42**	0	51	221	0	0	**272**	0	1	0	0	0	**1**	0	**511**
11:45AM	1	194	6	0	**201**	0	3	0	33	0	**36**	0	40	265	0	0	**305**	0	1	0	0	0	**1**	0	**543**
Hourly Total	2	808	29	0	**839**	0	30	0	95	0	**125**	1	181	950	0	0	**1131**	0	2	0	0	0	**2**	2	**2097**
12:00PM	0	232	7	0	**239**	0	7	0	23	0	**30**	2	54	267	0	0	**321**	0	0	0	0	0	**0**	0	**590**
12:15PM	0	221	2	0	**223**	0	9	0	41	0	**50**	0	39	228	0	0	**267**	0	0	0	0	0	**0**	1	**540**
12:30PM	0	211	6	0	**217**	0	5	0	16	0	**21**	0	41	254	0	0	**295**	0	0	0	0	0	**0**	1	**533**
12:45PM	0	233	7	0	**240**	0	7	0	30	0	**37**	0	43	272	0	0	**315**	0	0	0	0	0	**0**	1	**592**
Hourly Total	0	897	22	0	**919**	0	28	0	110	0	**138**	2	177	1021	0	0	**1198**	0	0	0	0	0	**0**	3	**2255**
1:00PM	0	238	4	0	**242**	0	5	0	22	0	**27**	0	51	257	0	0	**308**	0	0	0	0	0	**0**	0	**577**
1:15PM	0	202	3	0	**205**	0	5	0	38	0	**43**	0	31	260	0	0	**291**	0	0	0	0	0	**0**	1	**539**
1:30PM	0	213	2	0	**215**	0	7	0	42	0	**49**	2	49	236	0	0	**285**	0	0	0	0	0	**0**	1	**549**
1:45PM	0	222	5	0	**227**	0	5	0	39	0	**44**	0	37	256	0	0	**293**	0	0	0	0	0	**0**	0	**564**
Hourly Total	0	875	14	0	**889**	0	22	0	141	0	**163**	2	168	1009	0	0	**1177**	0	0	0	0	0	**0**	2	**2229**
Total	92	8080	195	0	**8367**	0	311	6	764	0	**1081**	9	1167	8960	70	0	**10197**	0	58	10	76	0	**144**	10	**19789**
% Approach	1.1%	96.6%	2.3%	0%	**-**	-	28.8%	0.6%	70.7%	0%	**-**	-	11.4%	87.9%	0.7%	0%	**-**	-	40.3%	6.9%	52.8%	0%	**-**	-	-
% Total	0.5%	40.8%	1.0%	0%	**42.3%**	-	1.6%	0%	3.9%	0%	**5.5%**	-	5.9%	45.3%	0.4%	0%	**51.5%**	-	0.3%	0.1%	0.4%	0%	**0.7%**	-	-
Motorcycles	0	12	0	0	**12**	-	1	0	0	0	**1**	-	2	14	0	0	**16**	-	0	0	0	0	**0**	-	29
% Motorcycles	0%	0.1%	0%	0%	**0.1%**	-	0.3%	0%	0%	0%	**0.1%**	-	0.2%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Lights	92	7732	178	0	**8002**	-	309	6	757	0	**1072**	-	1137	8614	70	0	**9821**	-	58	10	76	0	**144**	-	19039
% Lights	100%	95.7%	91.3%	0%	**95.6%**	-	99.4%	100%	99.1%	0%	**99.2%**	-	97.4%	96.1%	100%	0%	**96.3%**	-	100%	100%	100%	0%	**100%**	-	96.2%
Single-Unit Trucks	0	156	0	0	**156**	-	0	0	4	0	**4**	-	3	187	0	0	**190**	-	0	0	0	0	**0**	-	350
% Single-Unit Trucks	0%	1.9%	0%	0%	**1.9%**	-	0%	0%	0.5%	0%	**0.4%**	-	0.3%	2.1%	0%	0%	**1.9%**	-	0%	0%	0%	0%	**0%**	-	1.8%
Articulated Trucks	0	95	1	0	**96**	-	0	0	2	0	**2**	-	0	91	0	0	**91**	-	0	0	0	0	**0**	-	189
% Articulated Trucks	0%	1.2%	0.5%	0%	**1.1%**	-	0%	0%	0.3%	0%	**0.2%**	-	0%	1.0%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	1.0%

Leg	Granite Street (Route 37)						South Shore Plaza Road						Granite Street (Route 37)						Kindercare Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Buses	0	83	16	0	**99**	-	1	0	1	0	**2**	-	23	53	0	0	**76**	-	0	0	0	0	**0**	-	177
% Buses	0%	1.0%	8.2%	0%	**1.2%**	-	0.3%	0%	0.1%	0%	**0.2%**	-	2.0%	0.6%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0.9%
Bicycles on Road	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2	1	0	0	**3**	-	0	0	0	0	**0**	-	5
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.2%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	-	-	-	-	-	-	-	70.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	-	-	-	-	-	-	-	30.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (6) Granite @ Kindercare TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065009, Location: 42.214762, -71.022019

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Kindercare Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	1	182	8	0	**191**	0	2	0	3	0	**5**	0	36	383	6	0	**425**	0	2	0	5	0	**7**	0	**628**
8:00AM	5	169	11	0	**185**	0	0	0	2	0	**2**	0	33	352	3	0	**388**	0	1	0	3	0	**4**	0	**579**
8:15AM	3	172	9	0	**184**	0	2	1	13	0	**16**	0	37	306	3	0	**346**	0	1	2	6	0	**9**	0	**555**
8:30AM	4	166	17	0	**187**	0	6	0	8	0	**14**	0	38	315	5	0	**358**	0	2	1	2	0	**5**	1	**564**
Total	13	689	45	0	**747**	0	10	1	26	0	**37**	0	144	1356	17	0	**1517**	0	6	3	16	0	**25**	1	**2326**
% Approach	1.7%	92.2%	6.0%	0%	**-**	-	27.0%	2.7%	70.3%	0%	**-**	-	9.5%	89.4%	1.1%	0%	**-**	-	24.0%	12.0%	64.0%	0%	**-**	-	-
% Total	0.6%	29.6%	1.9%	0%	**32.1%**	-	0.4%	0%	1.1%	0%	**1.6%**	-	6.2%	58.3%	0.7%	0%	**65.2%**	-	0.3%	0.1%	0.7%	0%	**1.1%**	-	-
PHF	0.650	0.946	0.662	-	**0.978**	-	0.417	0.250	0.500	-	**0.578**	-	0.941	0.885	0.708	-	**0.892**	-	0.750	0.375	0.667	-	**0.694**	-	0.926
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	13	628	43	0	**684**	-	10	1	26	0	**37**	-	139	1283	17	0	**1439**	-	6	3	16	0	**25**	-	2185
% Lights	100%	91.1%	95.6%	0%	**91.6%**	-	100%	100%	100%	0%	**100%**	-	96.5%	94.6%	100%	0%	**94.9%**	-	100%	100%	100%	0%	**100%**	-	93.9%
Single-Unit Trucks	0	32	0	0	**32**	-	0	0	0	0	**0**	-	1	57	0	0	**58**	-	0	0	0	0	**0**	-	90
% Single-Unit Trucks	0%	4.6%	0%	0%	**4.3%**	-	0%	0%	0%	0%	**0%**	-	0.7%	4.2%	0%	0%	**3.8%**	-	0%	0%	0%	0%	**0%**	-	3.9%
Articulated Trucks	0	11	0	0	**11**	-	0	0	0	0	**0**	-	0	13	0	0	**13**	-	0	0	0	0	**0**	-	24
% Articulated Trucks	0%	1.6%	0%	0%	**1.5%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	1.0%
Buses	0	18	2	0	**20**	-	0	0	0	0	**0**	-	3	3	0	0	**6**	-	0	0	0	0	**0**	-	26
% Buses	0%	2.6%	4.4%	0%	**2.7%**	-	0%	0%	0%	0%	**0%**	-	2.1%	0.2%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	1.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.7%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (6) Granite @ Kindercare TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065009, Location: 42.214762, -71.022019

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Kindercare Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	7	334	4	0	**345**	0	20	0	27	0	**47**	0	35	187	5	0	**227**	0	2	0	4	0	**6**	1	**625**
4:45PM	8	297	3	0	**308**	0	28	1	38	0	**67**	1	22	218	7	0	**247**	0	6	0	6	0	**12**	0	**634**
5:00PM	7	318	4	0	**329**	0	28	0	41	0	**69**	0	30	207	4	0	**241**	0	7	0	12	0	**19**	0	**658**
5:15PM	7	353	0	0	**360**	0	16	0	33	0	**49**	0	40	222	3	0	**265**	0	4	1	5	0	**10**	0	**684**
Total	29	1302	11	0	**1342**	0	92	1	139	0	**232**	1	127	834	19	0	**980**	0	19	1	27	0	**47**	1	**2601**
% Approach	2.2%	97.0%	0.8%	0%	**-**	-	39.7%	0.4%	59.9%	0%	**-**	-	13.0%	85.1%	1.9%	0%	**-**	-	40.4%	2.1%	57.4%	0%	**-**	-	**-**
% Total	1.1%	50.1%	0.4%	0%	**51.6%**	-	3.5%	0%	5.3%	0%	**8.9%**	-	4.9%	32.1%	0.7%	0%	**37.7%**	-	0.7%	0%	1.0%	0%	**1.8%**	-	**-**
PHF	0.906	0.922	0.688	-	**0.932**	-	0.821	0.250	0.848	-	**0.841**	-	0.794	0.939	0.679	-	**0.925**	-	0.679	0.250	0.563	-	**0.618**	-	0.951
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	29	1241	9	0	**1279**	-	91	1	139	0	**231**	-	125	820	19	0	**964**	-	19	1	27	0	**47**	-	2521
% Lights	100%	95.3%	81.8%	0%	**95.3%**	-	98.9%	100%	100%	0%	**99.6%**	-	98.4%	98.3%	100%	0%	**98.4%**	-	100%	100%	100%	0%	**100%**	-	96.9%
Single-Unit Trucks	0	23	0	0	**23**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	0	0	0	0	**0**	-	31
% Single-Unit Trucks	0%	1.8%	0%	0%	**1.7%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	0	20	0	0	**20**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	25
% Articulated Trucks	0%	1.5%	0%	0%	**1.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	1.0%
Buses	0	18	2	0	**20**	-	1	0	0	0	**1**	-	2	1	0	0	**3**	-	0	0	0	0	**0**	-	24
% Buses	0%	1.4%	18.2%	0%	**1.5%**	-	1.1%	0%	0%	0%	**0.4%**	-	1.6%	0.1%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.9%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (6) Granite @ Kindercare TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:45PM - 1:45 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065009, Location: 42.214762, -71.022019

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Kindercare Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:45PM	0	233	7	0	**240**	0	7	0	30	0	**37**	0	43	272	0	0	**315**	0	0	0	0	0	**0**	1	**592**
1:00PM	0	238	4	0	**242**	0	5	0	22	0	**27**	0	51	257	0	0	**308**	0	0	0	0	0	**0**	0	**577**
1:15PM	0	202	3	0	**205**	0	5	0	38	0	**43**	0	31	260	0	0	**291**	0	0	0	0	0	**0**	1	**539**
1:30PM	0	213	2	0	**215**	0	7	0	42	0	**49**	2	49	236	0	0	**285**	0	0	0	0	0	**0**	1	**549**
Total	0	886	16	0	**902**	0	24	0	132	0	**156**	2	174	1025	0	0	**1199**	0	0	0	0	0	**0**	3	**2257**
% Approach	0%	98.2%	1.8%	0%	**-**	-	15.4%	0%	84.6%	0%	**-**	-	14.5%	85.5%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	39.3%	0.7%	0%	**40.0%**	-	1.1%	0%	5.8%	0%	**6.9%**	-	7.7%	45.4%	0%	0%	**53.1%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.931	0.571	-	**0.932**	-	0.857	-	0.786	-	**0.796**	-	0.853	0.945	-	-	**0.954**	-	-	-	-	-	**-**	-	0.954
Motorcycles	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	6
% Motorcycles	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0.3%
Lights	0	866	15	0	**881**	-	24	0	131	0	**155**	-	172	1009	0	0	**1181**	-	0	0	0	0	**0**	-	2217
% Lights	0%	97.7%	93.8%	0%	**97.7%**	-	100%	0%	99.2%	0%	**99.4%**	-	98.9%	98.4%	0%	0%	**98.5%**	-	0%	0%	0%	0%	**-**	-	98.2%
Single-Unit Trucks	0	7	0	0	**7**	-	0	0	1	0	**1**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	13
% Single-Unit Trucks	0%	0.8%	0%	0%	**0.8%**	-	0%	0%	0.8%	0%	**0.6%**	-	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0.6%
Articulated Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	4
% Articulated Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0.2%
Buses	0	7	1	0	**8**	-	0	0	0	0	**0**	-	2	6	0	0	**8**	-	0	0	0	0	**0**	-	16
% Buses	0%	0.8%	6.3%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	1.1%	0.6%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0.7%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	66.7%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	33.3%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (6) Granite @ Kindercare TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065009, Location: 42.214762, -71.022019

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Granite Street (Route 37) Southbound						South Shore Plaza Road Westbound						Granite Street (Route 37) Northbound						Kindercare Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	0	238	4	0	**242**	0	5	0	22	0	**27**	0	51	257	0	0	**308**	0	0	0	0	0	**0**	0	**577**
1:15PM	0	202	3	0	**205**	0	5	0	38	0	**43**	0	31	260	0	0	**291**	0	0	0	0	0	**0**	1	**539**
1:30PM	0	213	2	0	**215**	0	7	0	42	0	**49**	2	49	236	0	0	**285**	0	0	0	0	0	**0**	1	**549**
1:45PM	0	222	5	0	**227**	0	5	0	39	0	**44**	0	37	256	0	0	**293**	0	0	0	0	0	**0**	0	**564**
Total	0	875	14	0	**889**	0	22	0	141	0	**163**	2	168	1009	0	0	**1177**	0	0	0	0	0	**0**	2	**2229**
% Approach	0%	98.4%	1.6%	0%	**-**	-	13.5%	0%	86.5%	0%	**-**	-	14.3%	85.7%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	39.3%	0.6%	0%	**39.9%**	-	1.0%	0%	6.3%	0%	**7.3%**	-	7.5%	45.3%	0%	0%	**52.8%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.919	0.700	-	**0.918**	-	0.786	-	0.839	-	**0.832**	-	0.824	0.970	-	-	**0.955**	-	-	-	-	-	**-**	-	0.966
Motorcycles	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	7
% Motorcycles	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0.3%
Lights	0	860	13	0	**873**	-	22	0	140	0	**162**	-	166	993	0	0	**1159**	-	0	0	0	0	**0**	-	2194
% Lights	0%	98.3%	92.9%	0%	**98.2%**	-	100%	0%	99.3%	0%	**99.4%**	-	98.8%	98.4%	0%	0%	**98.5%**	-	0%	0%	0%	0%	**-**	-	98.4%
Single-Unit Trucks	0	4	0	0	**4**	-	0	0	1	0	**1**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	10
% Single-Unit Trucks	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0.7%	0%	**0.6%**	-	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0.4%
Articulated Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	0	6	1	0	**7**	-	0	0	0	0	**0**	-	2	6	0	0	**8**	-	0	0	0	0	**0**	-	15
% Buses	0%	0.7%	7.1%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	1.2%	0.6%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0.7%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
2023-05-04 6:00AM	11	38	16	2	0	**67**	0	7	5	9	1	0	**22**	0	3	99	9	8	0	**119**	0
6:15AM	1	75	33	2	0	**111**	0	0	8	14	2	0	**24**	0	3	104	10	4	0	**121**	0
6:30AM	12	72	35	2	0	**121**	0	8	9	16	6	0	**39**	0	4	115	17	11	0	**147**	0
6:45AM	4	91	48	4	0	**147**	0	21	17	33	3	0	**74**	0	0	164	22	13	0	**199**	0
Hourly Total	28	276	132	10	0	**446**	0	36	39	72	12	0	**159**	0	10	482	58	36	0	**586**	0
7:00AM	2	84	33	2	0	**121**	0	10	15	46	3	0	**74**	0	1	157	24	17	0	**199**	0
7:15AM	2	77	50	4	0	**133**	0	25	25	93	1	0	**144**	0	3	134	12	23	0	**172**	0
7:30AM	4	69	67	13	0	**153**	0	21	27	47	1	0	**96**	0	9	182	25	15	0	**231**	0
7:45AM	9	99	92	8	0	**208**	0	25	40	43	2	0	**110**	0	7	205	21	6	0	**239**	0
Hourly Total	17	329	242	27	0	**615**	0	81	107	229	7	0	**424**	0	20	678	82	61	0	**841**	0
8:00AM	9	103	64	8	0	**184**	0	27	37	39	3	0	**106**	1	5	197	27	6	0	**235**	0
8:15AM	9	81	72	10	0	**172**	0	29	48	54	4	0	**135**	0	5	178	24	8	0	**215**	0
8:30AM	7	100	59	8	0	**174**	0	37	42	43	6	0	**128**	0	4	159	28	16	0	**207**	1
8:45AM	6	133	66	10	0	**215**	0	23	28	33	4	0	**88**	1	4	115	22	17	0	**158**	1
Hourly Total	31	417	261	36	0	**745**	0	116	155	169	17	0	**457**	2	18	649	101	47	0	**815**	2
3:00PM	8	149	153	19	0	**329**	0	25	25	36	7	0	**93**	0	8	76	14	14	0	**112**	0
3:15PM	6	139	176	23	0	**344**	0	9	27	31	1	0	**68**	0	6	102	32	13	0	**153**	0
3:30PM	7	135	153	17	0	**312**	0	22	25	40	2	0	**89**	0	3	87	32	13	0	**135**	0
3:45PM	10	177	167	25	0	**379**	0	15	23	44	4	0	**86**	0	6	113	29	11	0	**159**	0
Hourly Total	31	600	649	84	0	**1364**	0	71	100	151	14	0	**336**	0	23	378	107	51	0	**559**	0
4:00PM	12	143	138	13	0	**306**	0	15	21	52	1	0	**89**	1	7	98	27	9	0	**141**	1
4:15PM	6	140	138	15	0	**299**	0	15	31	51	4	0	**101**	1	7	103	42	13	0	**165**	0
4:30PM	14	183	171	26	0	**394**	0	19	29	38	1	0	**87**	0	6	88	32	9	0	**135**	0
4:45PM	7	169	159	21	0	**356**	0	5	35	45	5	0	**90**	1	7	110	30	15	0	**162**	0
Hourly Total	39	635	606	75	0	**1355**	0	54	116	186	11	0	**367**	3	27	399	131	46	0	**603**	1
5:00PM	6	141	157	19	0	**323**	0	13	20	56	3	0	**92**	2	3	92	27	11	0	**133**	1
5:15PM	12	197	183	29	0	**421**	0	7	15	46	3	0	**71**	0	9	119	14	14	0	**156**	0
5:30PM	5	160	177	28	0	**370**	0	20	34	58	8	1	**121**	0	8	116	30	11	0	**165**	0
5:45PM	11	152	127	24	0	**314**	0	19	29	54	6	0	**108**	2	6	79	20	13	0	**118**	0
Hourly Total	34	650	644	100	0	**1428**	0	59	98	214	20	1	**392**	4	26	406	91	49	0	**572**	1
2023-05-06 11:00AM	13	109	78	5	0	**205**	1	23	16	28	4	0	**71**	0	5	125	20	10	0	**160**	0
11:15AM	9	95	107	19	0	**230**	0	23	12	27	10	0	**72**	2	8	137	17	13	0	**175**	0
11:30AM	13	92	104	8	0	**217**	0	34	22	38	4	0	**98**	0	7	117	11	7	0	**142**	0
11:45AM	9	86	97	7	0	**199**	0	29	16	42	5	0	**92**	0	10	171	23	8	0	**212**	0
Hourly Total	44	382	386	39	0	**851**	1	109	66	135	23	0	**333**	2	30	550	71	38	0	**689**	0
12:00PM	10	113	114	21	0	**258**	0	47	18	39	9	0	**113**	1	12	130	15	12	0	**169**	1
12:15PM	13	85	129	13	0	**240**	0	31	23	37	8	0	**99**	1	9	143	14	17	0	**183**	0
12:30PM	36	84	142	12	0	**274**	0	27	17	29	8	0	**81**	0	7	146	19	11	0	**183**	0
12:45PM	10	114	108	5	0	**237**	0	23	16	28	7	0	**74**	1	3	159	14	12	0	**188**	1
Hourly Total	69	396	493	51	0	**1009**	0	128	74	133	32	0	**367**	3	31	578	62	52	0	**723**	2
1:00PM	13	105	126	10	0	**254**	2	28	18	22	8	0	**76**	0	10	130	19	12	0	**171**	0
1:15PM	14	91	119	11	0	**235**	0	23	25	30	3	0	**81**	0	6	137	24	8	0	**175**	0
1:30PM	7	114	136	15	0	**272**	0	28	14	41	4	0	**87**	0	4	140	9	3	0	**156**	0
1:45PM	10	102	106	12	0	**230**	1	24	25	39	3	0	**91**	1	6	131	13	17	1	**168**	0
Hourly Total	44	412	487	48	0	**991**	3	103	82	132	18	0	**335**	1	26	538	65	40	1	**670**	0
Total	337	4097	3900	470	0	**8804**	4	757	837	1421	154	1	**3170**	15	211	4658	768	420	1	**6058**	6
% Approach	3.8%	46.5%	44.3%	5.3%	0%	**-**	-	23.9%	26.4%	44.8%	4.9%	0%	**-**	-	3.5%	76.9%	12.7%	6.9%	0%	**-**	-
% Total	1.3%	15.8%	15.1%	1.8%	0%	**34.0%**	-	2.9%	3.2%	5.5%	0.6%	0%	**12.3%**	-	0.8%	18.0%	3.0%	1.6%	0%	**23.4%**	-
Motorcycles	0	2	4	1	0	**7**	-	4	0	2	0	0	**6**	-	0	6	0	0	0	**6**	-
% Motorcycles	0%	0%	0.1%	0.2%	0%	**0.1%**	-	0.5%	0%	0.1%	0%	0%	**0.2%**	-	0%	0.1%	0%	0%	0%	**0.1%**	-
Lights	319	3847	3834	457	0	**8457**	-	747	811	1381	153	1	**3093**	-	201	4571	749	412	1	**5934**	-
% Lights	94.7%	93.9%	98.3%	97.2%	0%	**96.1%**	-	98.7%	96.9%	97.2%	99.4%	100%	**97.6%**	-	95.3%	98.1%	97.5%	98.1%	100%	**98.0%**	-

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
Single-Unit Trucks	10	104	40	7	0	**161**	-	2	16	17	1	0	**36**	-	4	47	15	7	0	**73**	-
% Single-Unit Trucks	3.0%	2.5%	1.0%	1.5%	0%	**1.8%**	-	0.3%	1.9%	1.2%	0.6%	0%	**1.1%**	-	1.9%	1.0%	2.0%	1.7%	0%	**1.2%**	-
Articulated Trucks	6	79	10	2	0	**97**	-	0	3	6	0	0	**9**	-	0	18	1	0	0	**19**	-
% Articulated Trucks	1.8%	1.9%	0.3%	0.4%	0%	**1.1%**	-	0%	0.4%	0.4%	0%	0%	**0.3%**	-	0%	0.4%	0.1%	0%	0%	**0.3%**	-
Buses	2	65	12	2	0	**81**	-	3	6	15	0	0	**24**	-	6	15	3	1	0	**25**	-
% Buses	0.6%	1.6%	0.3%	0.4%	0%	**0.9%**	-	0.4%	0.7%	1.1%	0%	0%	**0.8%**	-	2.8%	0.3%	0.4%	0.2%	0%	**0.4%**	-
Bicycles on Road	0	0	0	1	0	**1**	-	1	1	0	0	0	**2**	-	0	1	0	0	0	**1**	-
% Bicycles on Road	0%	0%	0%	0.2%	0%	**0%**	-	0.1%	0.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	11	-	-	-	-	-	-	5
% Pedestrians	-	-	-	-	-	-	25.0%	-	-	-	-	-	-	73.3%	-	-	-	-	-	-	83.3%
Bicycles on Crosswalk	-	-	-	-	-	-	3	-	-	-	-	-	-	4	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	75.0%	-	-	-	-	-	-	26.7%	-	-	-	-	-	-	16.7%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street							West Street							
Direction	Northbound							Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
2023-05-04 6:00AM	2	7	105	7	0	**121**	0	4	4	4	10	0	**22**	0	**351**
6:15AM	3	5	105	4	0	**117**	0	4	9	7	10	0	**30**	0	**403**
6:30AM	4	21	113	3	0	**141**	0	5	6	7	5	0	**23**	0	**471**
6:45AM	5	15	138	9	0	**167**	0	6	16	10	8	0	**40**	0	**627**
Hourly Total	14	48	461	23	0	**546**	0	19	35	28	33	0	**115**	0	**1852**
7:00AM	5	0	169	7	0	**181**	1	9	22	0	9	0	**40**	1	**615**
7:15AM	7	0	159	10	0	**176**	0	7	19	0	10	0	**36**	0	**661**
7:30AM	2	0	164	11	0	**177**	0	4	24	0	10	0	**38**	0	**695**
7:45AM	6	0	177	6	0	**189**	0	7	19	0	13	0	**39**	0	**785**
Hourly Total	20	0	669	34	0	**723**	1	27	84	0	42	0	**153**	1	**2756**
8:00AM	5	26	151	7	0	**189**	0	13	28	19	14	0	**74**	0	**788**
8:15AM	10	40	129	6	0	**185**	0	10	27	18	18	0	**73**	0	**780**
8:30AM	10	22	136	10	0	**178**	0	4	22	14	7	0	**47**	0	**734**
8:45AM	8	38	160	8	0	**214**	0	5	24	20	10	0	**59**	0	**734**
Hourly Total	33	126	576	31	0	**766**	0	32	101	71	49	0	**253**	0	**3036**
3:00PM	7	37	117	12	0	**173**	0	8	50	29	12	0	**99**	0	**806**
3:15PM	11	28	98	20	0	**157**	0	6	38	15	6	0	**65**	0	**787**
3:30PM	14	35	126	19	0	**194**	0	12	38	16	8	0	**74**	0	**804**
3:45PM	9	28	86	17	0	**140**	0	7	47	33	9	0	**96**	0	**860**
Hourly Total	41	128	427	68	0	**664**	0	33	173	93	35	0	**334**	0	**3257**
4:00PM	17	0	108	18	0	**143**	0	9	27	23	5	0	**64**	0	**743**
4:15PM	15	0	84	9	0	**108**	0	23	31	25	10	0	**89**	0	**762**
4:30PM	22	0	105	17	0	**144**	0	11	26	15	8	0	**60**	0	**820**
4:45PM	16	0	104	18	0	**138**	0	12	34	1	8	0	**55**	0	**801**
Hourly Total	70	0	401	62	0	**533**	0	55	118	64	31	0	**268**	0	**3126**
5:00PM	12	41	100	21	0	**174**	0	12	36	30	16	0	**94**	0	**816**
5:15PM	6	26	109	8	0	**149**	0	7	27	30	3	0	**67**	0	**864**
5:30PM	8	31	88	14	0	**141**	0	6	34	29	11	0	**80**	0	**877**
5:45PM	15	39	125	9	0	**188**	0	10	18	24	7	0	**59**	0	**787**
Hourly Total	41	137	422	52	0	**652**	0	35	115	113	37	0	**300**	0	**3344**
2023-05-06 11:00AM	9	21	109	5	0	**144**	0	10	18	17	10	0	**55**	0	**635**
11:15AM	15	30	114	2	0	**161**	0	3	21	10	9	0	**43**	0	**681**
11:30AM	8	22	101	1	0	**132**	0	13	24	18	14	0	**69**	0	**658**
11:45AM	8	27	97	6	0	**138**	0	7	23	15	21	0	**66**	0	**707**
Hourly Total	40	100	421	14	0	**575**	0	33	86	60	54	0	**233**	0	**2681**
12:00PM	15	29	116	16	0	**176**	1	12	20	22	7	0	**61**	0	**777**
12:15PM	13	24	91	9	0	**137**	0	6	25	13	7	0	**51**	2	**710**
12:30PM	12	12	102	4	0	**130**	0	5	20	14	9	0	**48**	0	**716**
12:45PM	15	32	124	13	0	**184**	1	7	26	21	15	0	**69**	1	**752**
Hourly Total	55	97	433	42	0	**627**	2	30	91	70	38	0	**229**	3	**2955**
1:00PM	13	23	122	8	0	**166**	0	13	31	20	19	0	**83**	2	**750**
1:15PM	4	18	115	5	0	**142**	0	6	29	13	18	0	**66**	1	**699**
1:30PM	10	19	104	3	0	**136**	0	4	22	11	13	0	**50**	0	**701**
1:45PM	12	24	105	6	0	**147**	1	8	30	19	13	0	**70**	2	**706**
Hourly Total	39	84	446	22	0	**591**	1	31	112	63	63	0	**269**	5	**2856**
Total	353	720	4256	348	0	**5677**	4	295	915	562	382	0	**2154**	9	**25863**
% Approach	6.2%	12.7%	75.0%	6.1%	0%	**-**	-	13.7%	42.5%	26.1%	17.7%	0%	**-**	-	-
% Total	1.4%	2.8%	16.5%	1.3%	0%	**22.0%**	-	1.1%	3.5%	2.2%	1.5%	0%	**8.3%**	-	-
Motorcycles	0	0	4	1	0	**5**	-	0	3	3	1	0	**7**	-	31
% Motorcycles	0%	0%	0.1%	0.3%	0%	**0.1%**	-	0%	0.3%	0.5%	0.3%	0%	**0.3%**	-	0.1%
Lights	341	696	4007	330	0	**5374**	-	269	900	546	365	0	**2080**	-	24938
% Lights	96.6%	96.7%	94.1%	94.8%	0%	**94.7%**	-	91.2%	98.4%	97.2%	95.5%	0%	**96.6%**	-	96.4%

Leg	Granite Street							West Street							
Direction	Northbound							Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
Single-Unit Trucks	7	16	120	14	0	**157**	-	16	4	7	9	0	**36**	-	463
% Single-Unit Trucks	2.0%	2.2%	2.8%	4.0%	0%	**2.8%**	-	5.4%	0.4%	1.2%	2.4%	0%	**1.7%**	-	1.8%
Articulated Trucks	1	0	64	1	0	**66**	-	3	3	1	4	0	**11**	-	202
% Articulated Trucks	0.3%	0%	1.5%	0.3%	0%	**1.2%**	-	1.0%	0.3%	0.2%	1.0%	0%	**0.5%**	-	0.8%
Buses	4	6	61	2	0	**73**	-	6	3	4	3	0	**16**	-	219
% Buses	1.1%	0.8%	1.4%	0.6%	0%	**1.3%**	-	2.0%	0.3%	0.7%	0.8%	0%	**0.7%**	-	0.8%
Bicycles on Road	0	2	0	0	0	**2**	-	1	2	1	0	0	**4**	-	10
% Bicycles on Road	0%	0.3%	0%	0%	0%	**0%**	-	0.3%	0.2%	0.2%	0%	0%	**0.2%**	-	0%
Pedestrians	-	-	-	-	-	-	4	-	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	77.8%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	22.2%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
2023-05-04 7:45AM	9	99	92	8	0	**208**	0	25	40	43	2	0	**110**	0	7	205	21	6	0	**239**	0
8:00AM	9	103	64	8	0	**184**	0	27	37	39	3	0	**106**	1	5	197	27	6	0	**235**	0
8:15AM	9	81	72	10	0	**172**	0	29	48	54	4	0	**135**	0	5	178	24	8	0	**215**	0
8:30AM	7	100	59	8	0	**174**	0	37	42	43	6	0	**128**	0	4	159	28	16	0	**207**	1
Total	34	383	287	34	0	**738**	0	118	167	179	15	0	**479**	1	21	739	100	36	0	**896**	1
% Approach	4.6%	51.9%	38.9%	4.6%	0%	**-**	-	24.6%	34.9%	37.4%	3.1%	0%	**-**	-	2.3%	82.5%	11.2%	4.0%	0%	**-**	-
% Total	1.1%	12.4%	9.3%	1.1%	0%	**23.9%**	-	3.8%	5.4%	5.8%	0.5%	0%	**15.5%**	-	0.7%	23.9%	3.2%	1.2%	0%	**29.0%**	-
PHF	0.944	0.930	0.780	0.850	-	**0.887**	-	0.797	0.870	0.829	0.625	-	**0.887**	-	0.750	0.901	0.893	0.563	-	**0.937**	-
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	28	343	276	31	0	**678**	-	117	164	175	14	0	**470**	-	17	718	96	35	0	**866**	-
% Lights	82.4%	89.6%	96.2%	91.2%	0%	**91.9%**	-	99.2%	98.2%	97.8%	93.3%	0%	**98.1%**	-	81.0%	97.2%	96.0%	97.2%	0%	**96.7%**	-
Single-Unit Trucks	3	13	11	3	0	**30**	-	0	1	1	1	0	**3**	-	2	15	4	1	0	**22**	-
% Single-Unit Trucks	8.8%	3.4%	3.8%	8.8%	0%	**4.1%**	-	0%	0.6%	0.6%	6.7%	0%	**0.6%**	-	9.5%	2.0%	4.0%	2.8%	0%	**2.5%**	-
Articulated Trucks	2	10	0	0	0	**12**	-	0	1	2	0	0	**3**	-	0	2	0	0	0	**2**	-
% Articulated Trucks	5.9%	2.6%	0%	0%	0%	**1.6%**	-	0%	0.6%	1.1%	0%	0%	**0.6%**	-	0%	0.3%	0%	0%	0%	**0.2%**	-
Buses	1	17	0	0	0	**18**	-	1	1	1	0	0	**3**	-	2	4	0	0	0	**6**	-
% Buses	2.9%	4.4%	0%	0%	0%	**2.4%**	-	0.8%	0.6%	0.6%	0%	0%	**0.6%**	-	9.5%	0.5%	0%	0%	0%	**0.7%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street							West Street							
Direction	Northbound							Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	6	0	177	6	0	**189**	0	7	19	0	13	0	**39**	0	**785**
8:00AM	5	26	151	7	0	**189**	0	13	28	19	14	0	**74**	0	**788**
8:15AM	10	40	129	6	0	**185**	0	10	27	18	18	0	**73**	0	**780**
8:30AM	10	22	136	10	0	**178**	0	4	22	14	7	0	**47**	0	**734**
Total	31	88	593	29	0	**741**	0	34	96	51	52	0	**233**	0	**3087**
% Approach	4.2%	11.9%	80.0%	3.9%	0%	**-**	-	14.6%	41.2%	21.9%	22.3%	0%	**-**	-	-
% Total	1.0%	2.9%	19.2%	0.9%	0%	**24.0%**	-	1.1%	3.1%	1.7%	1.7%	0%	**7.5%**	-	-
PHF	0.775	0.544	0.838	0.725	-	**0.979**	-	0.654	0.857	0.671	0.722	-	**0.787**	-	0.980
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Lights	28	80	548	22	0	**678**	-	30	95	49	49	0	**223**	-	2915
% Lights	90.3%	90.9%	92.4%	75.9%	0%	**91.5%**	-	88.2%	99.0%	96.1%	94.2%	0%	**95.7%**	-	94.4%
Single-Unit Trucks	2	5	36	6	0	**49**	-	1	0	1	3	0	**5**	-	109
% Single-Unit Trucks	6.5%	5.7%	6.1%	20.7%	0%	**6.6%**	-	2.9%	0%	2.0%	5.8%	0%	**2.1%**	-	3.5%
Articulated Trucks	0	0	7	1	0	**8**	-	1	0	0	0	0	**1**	-	26
% Articulated Trucks	0%	0%	1.2%	3.4%	0%	**1.1%**	-	2.9%	0%	0%	0%	0%	**0.4%**	-	0.8%
Buses	1	2	2	0	0	**5**	-	2	1	1	0	0	**4**	-	36
% Buses	3.2%	2.3%	0.3%	0%	0%	**0.7%**	-	5.9%	1.0%	2.0%	0%	0%	**1.7%**	-	1.2%
Bicycles on Road	0	1	0	0	0	**1**	-	0	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	1.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
2023-05-04 4:45PM	7	169	159	21	0	**356**	0	5	35	45	5	0	**90**	1	7	110	30	15	0	**162**	0
5:00PM	6	141	157	19	0	**323**	0	13	20	56	3	0	**92**	2	3	92	27	11	0	**133**	1
5:15PM	12	197	183	29	0	**421**	0	7	15	46	3	0	**71**	0	9	119	14	14	0	**156**	0
5:30PM	5	160	177	28	0	**370**	0	20	34	58	8	1	**121**	0	8	116	30	11	0	**165**	0
Total	30	667	676	97	0	**1470**	0	45	104	205	19	1	**374**	3	27	437	101	51	0	**616**	1
% Approach	2.0%	45.4%	46.0%	6.6%	0%	**-**	-	12.0%	27.8%	54.8%	5.1%	0.3%	**-**	-	4.4%	70.9%	16.4%	8.3%	0%	**-**	-
% Total	0.9%	19.9%	20.1%	2.9%	0%	**43.8%**	-	1.3%	3.1%	6.1%	0.6%	0%	**11.1%**	-	0.8%	13.0%	3.0%	1.5%	0%	**18.3%**	-
PHF	0.625	0.846	0.923	0.836	-	**0.873**	-	0.563	0.743	0.884	0.594	0.250	**0.773**	-	0.750	0.918	0.842	0.850	-	**0.933**	-
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	1	0	0	0	**1**	-
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	0%	**0.2%**	-
Lights	29	624	670	97	0	**1420**	-	45	102	201	19	1	**368**	-	27	429	97	50	0	**603**	-
% Lights	96.7%	93.6%	99.1%	100%	0%	**96.6%**	-	100%	98.1%	98.0%	100%	100%	**98.4%**	-	100%	98.2%	96.0%	98.0%	0%	**97.9%**	-
Single-Unit Trucks	0	15	4	0	0	**19**	-	0	2	2	0	0	**4**	-	0	4	4	1	0	**9**	-
% Single-Unit Trucks	0%	2.2%	0.6%	0%	0%	**1.3%**	-	0%	1.9%	1.0%	0%	0%	**1.1%**	-	0%	0.9%	4.0%	2.0%	0%	**1.5%**	-
Articulated Trucks	0	17	1	0	0	**18**	-	0	0	1	0	0	**1**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	2.5%	0.1%	0%	0%	**1.2%**	-	0%	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	1	11	1	0	0	**13**	-	0	0	1	0	0	**1**	-	0	3	0	0	0	**3**	-
% Buses	3.3%	1.6%	0.1%	0%	0%	**0.9%**	-	0%	0%	0.5%	0%	0%	**0.3%**	-	0%	0.7%	0%	0%	0%	**0.5%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Granite Street Northbound							West Street Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:45PM	16	0	104	18	0	**138**	0	12	34	1	8	0	**55**	0	**801**
5:00PM	12	41	100	21	0	**174**	0	12	36	30	16	0	**94**	0	**816**
5:15PM	6	26	109	8	0	**149**	0	7	27	30	3	0	**67**	0	**864**
5:30PM	8	31	88	14	0	**141**	0	6	34	29	11	0	**80**	0	**877**
Total	42	98	401	61	0	**602**	0	37	131	90	38	0	**296**	0	**3358**
% Approach	7.0%	16.3%	66.6%	10.1%	0%	**-**	-	12.5%	44.3%	30.4%	12.8%	0%	**-**	-	-
% Total	1.3%	2.9%	11.9%	1.8%	0%	**17.9%**	-	1.1%	3.9%	2.7%	1.1%	0%	**8.8%**	-	-
PHF	0.656	0.598	0.920	0.726	-	**0.865**	-	0.771	0.929	0.750	0.594	-	**0.793**	-	0.957
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	1
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Lights	41	95	387	60	0	**583**	-	36	130	88	37	0	**291**	-	3265
% Lights	97.6%	96.9%	96.5%	98.4%	0%	**96.8%**	-	97.3%	99.2%	97.8%	97.4%	0%	**98.3%**	-	97.2%
Single-Unit Trucks	1	3	7	1	0	**12**	-	1	0	2	0	0	**3**	-	47
% Single-Unit Trucks	2.4%	3.1%	1.7%	1.6%	0%	**2.0%**	-	2.7%	0%	2.2%	0%	0%	**1.0%**	-	1.4%
Articulated Trucks	0	0	5	0	0	**5**	-	0	0	0	1	0	**1**	-	25
% Articulated Trucks	0%	0%	1.2%	0%	0%	**0.8%**	-	0%	0%	0%	2.6%	0%	**0.3%**	-	0.7%
Buses	0	0	2	0	0	**2**	-	0	0	0	0	0	**0**	-	19
% Buses	0%	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0.6%
Bicycles on Road	0	0	0	0	0	**0**	-	0	1	0	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	0%	**0.3%**	-	0%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12PM - 1 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
2023-05-06 12:00PM	10	113	114	21	0	**258**	0	47	18	39	9	0	**113**	1	12	130	15	12	0	**169**	1
12:15PM	13	85	129	13	0	**240**	0	31	23	37	8	0	**99**	1	9	143	14	17	0	**183**	0
12:30PM	36	84	142	12	0	**274**	0	27	17	29	8	0	**81**	0	7	146	19	11	0	**183**	0
12:45PM	10	114	108	5	0	**237**	0	23	16	28	7	0	**74**	1	3	159	14	12	0	**188**	1
Total	69	396	493	51	0	**1009**	0	128	74	133	32	0	**367**	3	31	578	62	52	0	**723**	2
% Approach	6.8%	39.2%	48.9%	5.1%	0%	**-**	-	34.9%	20.2%	36.2%	8.7%	0%	**-**	-	4.3%	79.9%	8.6%	7.2%	0%	**-**	-
% Total	2.3%	13.4%	16.7%	1.7%	0%	**34.1%**	-	4.3%	2.5%	4.5%	1.1%	0%	**12.4%**	-	1.0%	19.6%	2.1%	1.8%	0%	**24.5%**	-
PHF	0.479	0.868	0.868	0.607	-	**0.921**	-	0.676	0.793	0.853	0.889	-	**0.815**	-	0.646	0.909	0.816	0.765	-	**0.961**	-
Motorcycles	0	1	4	0	0	**5**	-	1	0	0	0	0	**1**	-	0	2	0	0	0	**2**	-
% Motorcycles	0%	0.3%	0.8%	0%	0%	**0.5%**	-	0.8%	0%	0%	0%	0%	**0.3%**	-	0%	0.3%	0%	0%	0%	**0.3%**	-
Lights	68	386	485	51	0	**990**	-	126	73	132	32	0	**363**	-	30	571	60	52	0	**713**	-
% Lights	98.6%	97.5%	98.4%	100%	0%	**98.1%**	-	98.4%	98.6%	99.2%	100%	0%	**98.9%**	-	96.8%	98.8%	96.8%	100%	0%	**98.6%**	-
Single-Unit Trucks	1	5	2	0	0	**8**	-	0	0	1	0	0	**1**	-	0	1	2	0	0	**3**	-
% Single-Unit Trucks	1.4%	1.3%	0.4%	0%	0%	**0.8%**	-	0%	0%	0.8%	0%	0%	**0.3%**	-	0%	0.2%	3.2%	0%	0%	**0.4%**	-
Articulated Trucks	0	2	1	0	0	**3**	-	0	0	0	0	0	**0**	-	0	2	0	0	0	**2**	-
% Articulated Trucks	0%	0.5%	0.2%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	0%	**0.3%**	-
Buses	0	2	1	0	0	**3**	-	0	0	0	0	0	**0**	-	1	2	0	0	0	**3**	-
% Buses	0%	0.5%	0.2%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	3.2%	0.3%	0%	0%	0%	**0.4%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	1	1	0	0	0	**2**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0.8%	1.4%	0%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	-	-	50.0%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	-	-	50.0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12PM - 1 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Granite Street Northbound							West Street Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:00PM	15	29	116	16	0	**176**	1	12	20	22	7	0	**61**	0	**777**
12:15PM	13	24	91	9	0	**137**	0	6	25	13	7	0	**51**	2	**710**
12:30PM	12	12	102	4	0	**130**	0	5	20	14	9	0	**48**	0	**716**
12:45PM	15	32	124	13	0	**184**	1	7	26	21	15	0	**69**	1	**752**
Total	55	97	433	42	0	**627**	2	30	91	70	38	0	**229**	3	**2955**
% Approach	8.8%	15.5%	69.1%	6.7%	0%	**-**	-	13.1%	39.7%	30.6%	16.6%	0%	**-**	-	-
% Total	1.9%	3.3%	14.7%	1.4%	0%	**21.2%**	-	1.0%	3.1%	2.4%	1.3%	0%	**7.7%**	-	-
PHF	0.917	0.758	0.873	0.656	-	**0.852**	-	0.625	0.875	0.821	0.633	-	**0.826**	-	0.952
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	1	0	**1**	-	9
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	2.6%	0%	**0.4%**	-	0.3%
Lights	55	97	426	42	0	**620**	-	30	91	69	37	0	**227**	-	2913
% Lights	100%	100%	98.4%	100%	0%	**98.9%**	-	100%	100%	98.6%	97.4%	0%	**99.1%**	-	98.6%
Single-Unit Trucks	0	0	4	0	0	**4**	-	0	0	0	0	0	**0**	-	16
% Single-Unit Trucks	0%	0%	0.9%	0%	0%	**0.6%**	-	0%	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	5
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	0	3	0	0	**3**	-	0	0	0	0	0	**0**	-	9
% Buses	0%	0%	0.7%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	1	0	0	**1**	-	3
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	1.4%	0%	0%	**0.4%**	-	0.1%
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Granite Street (Route 37)							West Street							Franklin Street (Route 37)						
Direction	Southbound							Westbound							Northwestbound						
Time	R	T	BL	L	U	**App**	Ped*	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*
2023-05-06 1:00PM	13	105	126	10	0	**254**	2	28	18	22	8	0	**76**	0	10	130	19	12	0	**171**	0
1:15PM	14	91	119	11	0	**235**	0	23	25	30	3	0	**81**	0	6	137	24	8	0	**175**	0
1:30PM	7	114	136	15	0	**272**	0	28	14	41	4	0	**87**	0	4	140	9	3	0	**156**	0
1:45PM	10	102	106	12	0	**230**	1	24	25	39	3	0	**91**	1	6	131	13	17	1	**168**	0
Total	44	412	487	48	0	**991**	3	103	82	132	18	0	**335**	1	26	538	65	40	1	**670**	0
% Approach	4.4%	41.6%	49.1%	4.8%	0%	**-**	-	30.7%	24.5%	39.4%	5.4%	0%	**-**	-	3.9%	80.3%	9.7%	6.0%	0.1%	**-**	-
% Total	1.5%	14.4%	17.1%	1.7%	0%	**34.7%**	-	3.6%	2.9%	4.6%	0.6%	0%	**11.7%**	-	0.9%	18.8%	2.3%	1.4%	0%	**23.5%**	-
PHF	0.786	0.904	0.895	0.800	-	**0.911**	-	0.920	0.820	0.805	0.563	-	**0.920**	-	0.650	0.961	0.677	0.588	0.250	**0.957**	-
Motorcycles	0	0	0	0	0	**0**	-	0	0	2	0	0	**2**	-	0	2	0	0	0	**2**	-
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	1.5%	0%	0%	**0.6%**	-	0%	0.4%	0%	0%	0%	**0.3%**	-
Lights	44	402	482	48	0	**976**	-	102	82	130	18	0	**332**	-	26	533	64	40	1	**664**	-
% Lights	100%	97.6%	99.0%	100%	0%	**98.5%**	-	99.0%	100%	98.5%	100%	0%	**99.1%**	-	100%	99.1%	98.5%	100%	100%	**99.1%**	-
Single-Unit Trucks	0	4	2	0	0	**6**	-	0	0	0	0	0	**0**	-	0	1	1	0	0	**2**	-
% Single-Unit Trucks	0%	1.0%	0.4%	0%	0%	**0.6%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0.2%	1.5%	0%	0%	**0.3%**	-
Articulated Trucks	0	2	1	0	0	**3**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0.5%	0.2%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	4	2	0	0	**6**	-	1	0	0	0	0	**1**	-	0	2	0	0	0	**2**	-
% Buses	0%	1.0%	0.4%	0%	0%	**0.6%**	-	1.0%	0%	0%	0%	0%	**0.3%**	-	0%	0.4%	0%	0%	0%	**0.3%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (7) Granite @ West/Franklin TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065010, Location: 42.212039, -71.01968

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Granite Street Northbound							West Street Eastbound							
Time	HR	R	T	L	U	**App**	Ped*	R	BR	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	13	23	122	8	0	**166**	0	13	31	20	19	0	**83**	2	**750**
1:15PM	4	18	115	5	0	**142**	0	6	29	13	18	0	**66**	1	**699**
1:30PM	10	19	104	3	0	**136**	0	4	22	11	13	0	**50**	0	**701**
1:45PM	12	24	105	6	0	**147**	1	8	30	19	13	0	**70**	2	**706**
Total	39	84	446	22	0	**591**	1	31	112	63	63	0	**269**	5	**2856**
% Approach	6.6%	14.2%	75.5%	3.7%	0%	**-**	-	11.5%	41.6%	23.4%	23.4%	0%	**-**	-	-
% Total	1.4%	2.9%	15.6%	0.8%	0%	**20.7%**	-	1.1%	3.9%	2.2%	2.2%	0%	**9.4%**	-	-
PHF	0.750	0.875	0.914	0.688	-	**0.890**	-	0.577	0.903	0.788	0.829	-	**0.807**	-	0.952
Motorcycles	0	0	3	0	0	**3**	-	0	0	2	0	0	**2**	-	9
% Motorcycles	0%	0%	0.7%	0%	0%	**0.5%**	-	0%	0%	3.2%	0%	0%	**0.7%**	-	0.3%
Lights	39	82	436	22	0	**579**	-	30	112	61	62	0	**265**	-	2816
% Lights	100%	97.6%	97.8%	100%	0%	**98.0%**	-	96.8%	100%	96.8%	98.4%	0%	**98.5%**	-	98.6%
Single-Unit Trucks	0	2	3	0	0	**5**	-	0	0	0	0	0	**0**	-	13
% Single-Unit Trucks	0%	2.4%	0.7%	0%	0%	**0.8%**	-	0%	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	4	0	0	**4**	-	0	0	0	1	0	**1**	-	14
% Buses	0%	0%	0.9%	0%	0%	**0.7%**	-	0%	0%	0%	1.6%	0%	**0.4%**	-	0.5%
Bicycles on Road	0	0	0	0	0	**0**	-	1	0	0	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	3.2%	0%	0%	0%	0%	**0.4%**	-	0%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	60.0%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	40.0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (8) Franklin @ John West TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065011, Location: 42.207216, -71.012249

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Franklin Street (Route 37)						Driveway						Franklin Street (Route 37)						John West Leroy Jr Way						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	0	27	0	0	**27**	0	0	0	0	0	**0**	0	0	97	3	0	**100**	0	1	0	0	1	**2**	2	**129**
6:15AM	2	35	0	0	**37**	0	0	0	0	0	**0**	0	0	124	3	0	**127**	0	3	0	0	0	**3**	0	**167**
6:30AM	3	48	0	0	**51**	0	0	0	0	0	**0**	0	0	157	7	0	**164**	0	0	0	0	0	**0**	0	**215**
6:45AM	8	62	0	0	**70**	1	0	0	1	0	**1**	0	0	198	20	0	**218**	0	1	0	2	0	**3**	1	**292**
Hourly Total	13	172	0	0	**185**	1	0	0	1	0	**1**	0	0	576	33	0	**609**	0	5	0	2	1	**8**	3	**803**
7:00AM	18	63	0	0	**81**	5	0	0	0	0	**0**	1	1	175	65	0	**241**	0	21	0	4	0	**25**	0	**347**
7:15AM	26	61	0	0	**87**	6	0	0	0	0	**0**	1	0	138	64	0	**202**	0	46	0	20	0	**66**	3	**355**
7:30AM	7	94	0	0	**101**	2	0	0	0	0	**0**	1	0	202	26	0	**228**	0	43	0	12	0	**55**	1	**384**
7:45AM	2	106	0	0	**108**	1	0	0	0	0	**0**	1	0	222	9	0	**231**	0	22	0	6	0	**28**	1	**367**
Hourly Total	53	324	0	0	**377**	14	0	0	0	0	**0**	4	1	737	164	0	**902**	0	132	0	42	0	**174**	5	**1453**
8:00AM	1	95	0	0	**96**	2	0	0	0	0	**0**	6	0	217	7	0	**224**	0	2	0	2	0	**4**	2	**324**
8:15AM	1	112	0	0	**113**	0	0	0	0	0	**0**	0	0	197	12	0	**209**	0	5	0	1	0	**6**	0	**328**
8:30AM	2	83	0	0	**85**	0	0	0	0	0	**0**	0	0	230	6	0	**236**	0	2	0	0	0	**2**	0	**323**
8:45AM	2	113	0	0	**115**	0	0	0	0	0	**0**	0	0	173	1	0	**174**	0	4	0	0	0	**4**	0	**293**
Hourly Total	6	403	0	0	**409**	2	0	0	0	0	**0**	6	0	817	26	0	**843**	0	13	0	3	0	**16**	2	**1268**
3:00PM	3	218	0	0	**221**	3	0	0	1	0	**1**	8	0	126	7	0	**133**	0	8	0	6	0	**14**	1	**369**
3:15PM	0	193	0	0	**193**	0	0	0	0	0	**0**	0	0	136	9	0	**145**	0	14	0	3	0	**17**	11	**355**
3:30PM	1	207	0	0	**208**	3	0	0	0	0	**0**	1	0	141	9	0	**150**	0	10	0	3	0	**13**	4	**371**
3:45PM	3	192	0	0	**195**	3	0	0	0	0	**0**	1	0	150	14	0	**164**	0	9	0	1	0	**10**	2	**369**
Hourly Total	7	810	0	0	**817**	9	0	0	1	0	**1**	10	0	553	39	0	**592**	0	41	0	13	0	**54**	18	**1464**
4:00PM	5	212	0	0	**217**	1	0	0	0	0	**0**	0	0	141	11	0	**152**	0	3	0	1	0	**4**	0	**373**
4:15PM	4	183	0	0	**187**	1	0	0	0	0	**0**	0	0	151	10	0	**161**	0	18	0	1	0	**19**	0	**367**
4:30PM	4	214	0	0	**218**	0	0	0	0	0	**0**	0	0	160	17	0	**177**	0	17	0	0	0	**17**	0	**412**
4:45PM	7	189	0	0	**196**	0	0	0	0	0	**0**	1	0	141	19	0	**160**	0	8	0	4	0	**12**	2	**368**
Hourly Total	20	798	0	0	**818**	2	0	0	0	0	**0**	1	0	593	57	0	**650**	0	46	0	6	0	**52**	2	**1520**
5:00PM	6	200	0	0	**206**	0	0	0	0	0	**0**	1	0	143	11	0	**154**	0	12	0	3	0	**15**	1	**375**
5:15PM	6	194	0	0	**200**	1	0	0	0	0	**0**	2	0	171	8	0	**179**	0	3	0	3	0	**6**	1	**385**
5:30PM	1	145	0	0	**146**	1	0	0	0	0	**0**	0	1	144	21	0	**166**	0	7	0	3	0	**10**	1	**322**
5:45PM	5	178	0	0	**183**	1	0	0	0	0	**0**	0	0	130	28	0	**158**	0	7	0	1	0	**8**	0	**349**
Hourly Total	18	717	0	0	**735**	3	0	0	0	0	**0**	3	1	588	68	0	**657**	0	29	0	10	0	**39**	3	**1431**
2023-05-06 11:00AM	0	106	0	0	**106**	0	0	0	0	0	**0**	1	0	169	3	0	**172**	0	4	0	0	0	**4**	1	**282**
11:15AM	1	144	0	0	**145**	0	0	0	0	0	**0**	0	0	176	5	0	**181**	0	3	0	2	0	**5**	2	**331**
11:30AM	2	152	0	0	**154**	0	0	0	0	0	**0**	1	0	152	5	0	**157**	0	0	0	0	0	**0**	2	**311**
11:45AM	1	125	0	0	**126**	0	1	0	0	0	**1**	0	0	214	4	0	**218**	0	4	0	2	0	**6**	2	**351**
Hourly Total	4	527	0	0	**531**	0	1	0	0	0	**1**	2	0	711	17	0	**728**	0	11	0	4	0	**15**	7	**1275**
12:00PM	1	149	0	0	**150**	0	0	0	0	0	**0**	0	0	156	7	0	**163**	0	7	0	3	0	**10**	2	**323**
12:15PM	2	160	0	0	**162**	0	0	0	0	0	**0**	0	0	183	2	0	**185**	0	6	0	0	0	**6**	2	**353**
12:30PM	1	160	0	0	**161**	0	0	0	0	0	**0**	0	0	180	7	0	**187**	0	4	0	0	0	**4**	0	**352**
12:45PM	2	160	0	0	**162**	0	0	0	0	0	**0**	0	0	171	3	0	**174**	0	3	0	2	0	**5**	3	**341**
Hourly Total	6	629	0	0	**635**	0	0	0	0	0	**0**	0	0	690	19	0	**709**	0	20	0	5	0	**25**	7	**1369**
1:00PM	0	178	0	0	**178**	0	0	0	0	0	**0**	0	0	201	12	0	**213**	0	2	0	0	0	**2**	1	**393**
1:15PM	0	168	0	0	**168**	8	0	0	0	0	**0**	6	0	153	3	0	**156**	0	5	0	0	0	**5**	4	**329**
1:30PM	2	157	0	0	**159**	3	0	0	0	0	**0**	3	0	170	14	0	**184**	0	2	0	0	0	**2**	0	**345**
1:45PM	2	156	0	0	**158**	0	0	0	0	0	**0**	0	0	166	11	0	**177**	0	7	0	3	0	**10**	0	**345**
Hourly Total	4	659	0	0	**663**	11	0	0	0	0	**0**	9	0	690	40	0	**730**	0	16	0	3	0	**19**	5	**1412**
Total	131	5039	0	0	**5170**	42	1	0	2	0	**3**	35	2	5955	463	0	**6420**	0	313	0	88	1	**402**	52	**11995**
% Approach	2.5%	97.5%	0%	0%	**-**	-	33.3%	0%	66.7%	0%	**-**	-	0%	92.8%	7.2%	0%	**-**	-	77.9%	0%	21.9%	0.2%	**-**	-	-
% Total	1.1%	42.0%	0%	0%	**43.1%**	-	0%	0%	0%	0%	**0%**	-	0%	49.6%	3.9%	0%	**53.5%**	-	2.6%	0%	0.7%	0%	**3.4%**	-	-
Motorcycles	0	7	0	0	**7**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	0	0	1	0	**1**	-	16
% Motorcycles	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	1.1%	0%	**0.2%**	-	0.1%
Lights	131	4943	0	0	**5074**	-	1	0	2	0	**3**	-	2	5830	456	0	**6288**	-	308	0	85	1	**394**	-	11759
% Lights	100%	98.1%	0%	0%	**98.1%**	-	100%	0%	100%	0%	**100%**	-	100%	97.9%	98.5%	0%	**97.9%**	-	98.4%	0%	96.6%	100%	**98.0%**	-	98.0%
Single-Unit Trucks	0	50	0	0	**50**	-	0	0	0	0	**0**	-	0	72	0	0	**72**	-	1	0	1	0	**2**	-	124
% Single-Unit Trucks	0%	1.0%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.1%**	-	0.3%	0%	1.1%	0%	**0.5%**	-	1.0%

Leg Direction	Franklin Street (Route 37) Southbound						Driveway Westbound						Franklin Street (Route 37) Northbound						John West Leroy Jr Way Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	0	14	0	0	**14**	-	0	0	0	0	**0**	-	0	21	0	0	**21**	-	0	0	0	0	**0**	-	35
% Articulated Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	23	0	0	**23**	-	0	0	0	0	**0**	-	0	23	4	0	**27**	-	4	0	1	0	**5**	-	55
% Buses	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0.9%	0%	**0.4%**	-	1.3%	0%	1.1%	0%	**1.2%**	-	0.5%
Bicycles on Road	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	3	0	**4**	-	0	0	0	0	**0**	-	6
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.6%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	36	-	-	-	-	-	27	-	-	-	-	-	0	-	-	-	-	-	47	
% Pedestrians	-	-	-	-	-	85.7%	-	-	-	-	-	77.1%	-	-	-	-	-	-	-	-	-	-	-	90.4%	-
Bicycles on Crosswalk	-	-	-	-	-	6	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	5	
% Bicycles on Crosswalk	-	-	-	-	-	14.3%	-	-	-	-	-	22.9%	-	-	-	-	-	-	-	-	-	-	-	9.6%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (8) Franklin @ John West TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7AM - 8 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065011, Location: 42.207216, -71.012249

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Franklin Street (Route 37) Southbound						Driveway Westbound						Franklin Street (Route 37) Northbound						John West Leroy Jr Way Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:00AM	18	63	0	0	**81**	5	0	0	0	0	**0**	1	1	175	65	0	**241**	0	21	0	4	0	**25**	0	**347**
7:15AM	26	61	0	0	**87**	6	0	0	0	0	**0**	1	0	138	64	0	**202**	0	46	0	20	0	**66**	3	**355**
7:30AM	7	94	0	0	**101**	2	0	0	0	0	**0**	1	0	202	26	0	**228**	0	43	0	12	0	**55**	1	**384**
7:45AM	2	106	0	0	**108**	1	0	0	0	0	**0**	1	0	222	9	0	**231**	0	22	0	6	0	**28**	1	**367**
Total	53	324	0	0	**377**	14	0	0	0	0	**0**	4	1	737	164	0	**902**	0	132	0	42	0	**174**	5	**1453**
% Approach	14.1%	85.9%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%	81.7%	18.2%	0%	**-**	-	75.9%	0%	24.1%	0%	**-**	-	**-**
% Total	3.6%	22.3%	0%	0%	**25.9%**	-	0%	0%	0%	0%	**0%**	-	0.1%	50.7%	11.3%	0%	**62.1%**	-	9.1%	0%	2.9%	0%	**12.0%**	-	**-**
PHF	0.510	0.764	-	-	**0.873**	-	-	-	-	-	**-**	-	0.250	0.830	0.627	-	**0.935**	-	0.717	-	0.525	-	**0.659**	-	0.945
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	53	312	0	0	**365**	-	0	0	0	0	**0**	-	1	710	160	0	**871**	-	128	0	41	0	**169**	-	1405
% Lights	100%	96.3%	0%	0%	**96.8%**	-	0%	0%	0%	0%	**-**	-	100%	96.3%	97.6%	0%	**96.6%**	-	97.0%	0%	97.6%	0%	**97.1%**	-	96.7%
Single-Unit Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	14	0	0	**14**	-	0	0	0	0	**0**	-	18
% Single-Unit Trucks	0%	1.2%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**-**	-	0%	1.9%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	0	0	0	0	**0**	-	10
% Articulated Trucks	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0%	1.1%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0.7%
Buses	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	5	3	0	**8**	-	4	0	1	0	**5**	-	19
% Buses	0%	1.9%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**-**	-	0%	0.7%	1.8%	0%	**0.9%**	-	3.0%	0%	2.4%	0%	**2.9%**	-	1.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0.6%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	14	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	80.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	20.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (8) Franklin @ John West TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065011, Location: 42.207216, -71.012249

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Franklin Street (Route 37) Southbound						Driveway Westbound						Franklin Street (Route 37) Northbound						John West Leroy Jr Way Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	4	214	0	0	**218**	0	0	0	0	0	**0**	0	0	160	17	0	**177**	0	17	0	0	0	**17**	0	**412**
4:45PM	7	189	0	0	**196**	0	0	0	0	0	**0**	1	0	141	19	0	**160**	0	8	0	4	0	**12**	2	**368**
5:00PM	6	200	0	0	**206**	0	0	0	0	0	**0**	1	0	143	11	0	**154**	0	12	0	3	0	**15**	1	**375**
5:15PM	6	194	0	0	**200**	1	0	0	0	0	**0**	2	0	171	8	0	**179**	0	3	0	3	0	**6**	1	**385**
Total	23	797	0	0	**820**	1	0	0	0	0	**0**	4	0	615	55	0	**670**	0	40	0	10	0	**50**	4	**1540**
% Approach	2.8%	97.2%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	91.8%	8.2%	0%	**-**	-	80.0%	0%	20.0%	0%	**-**	-	**-**
% Total	1.5%	51.8%	0%	0%	**53.2%**	-	0%	0%	0%	0%	**0%**	-	0%	39.9%	3.6%	0%	**43.5%**	-	2.6%	0%	0.6%	0%	**3.2%**	-	**-**
PHF	0.821	0.930	-	-	**0.939**	-	-	-	-	-	**-**	-	-	0.899	0.724	-	**0.936**	-	0.588	-	0.625	-	**0.735**	-	0.934
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	23	787	0	0	**810**	-	0	0	0	0	**0**	-	0	608	55	0	**663**	-	40	0	10	0	**50**	-	1523
% Lights	100%	98.7%	0%	0%	**98.8%**	-	0%	0%	0%	0%	**-**	-	0%	98.9%	100%	0%	**99.0%**	-	100%	0%	100%	0%	**100%**	-	98.9%
Single-Unit Trucks	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	10
% Single-Unit Trucks	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0%	0.8%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0.6%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	3
% Buses	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (8) Franklin @ John West TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065011, Location: 42.207216, -71.012249

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Franklin Street (Route 37) Southbound						Driveway Westbound						Franklin Street (Route 37) Northbound						John West Leroy Jr Way Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	2	160	0	0	**162**	0	0	0	0	0	**0**	0	0	183	2	0	**185**	0	6	0	0	0	**6**	2	**353**
12:30PM	1	160	0	0	**161**	0	0	0	0	0	**0**	0	0	180	7	0	**187**	0	4	0	0	0	**4**	0	**352**
12:45PM	2	160	0	0	**162**	0	0	0	0	0	**0**	0	0	171	3	0	**174**	0	3	0	2	0	**5**	3	**341**
1:00PM	0	178	0	0	**178**	0	0	0	0	0	**0**	0	0	201	12	0	**213**	0	2	0	0	0	**2**	1	**393**
Total	5	658	0	0	**663**	0	0	0	0	0	**0**	0	0	735	24	0	**759**	0	15	0	2	0	**17**	6	**1439**
% Approach	0.8%	99.2%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	96.8%	3.2%	0%	**-**	-	88.2%	0%	11.8%	0%	**-**	-	**-**
% Total	0.3%	45.7%	0%	0%	**46.1%**	-	0%	0%	0%	0%	**0%**	-	0%	51.1%	1.7%	0%	**52.7%**	-	1.0%	0%	0.1%	0%	**1.2%**	-	**-**
PHF	0.625	0.924	-	-	**0.931**	-	-	-	-	-	**-**	-	-	0.914	0.500	-	**0.893**	-	0.625	-	0.250	-	**0.708**	-	0.916
Motorcycles	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	5
% Motorcycles	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Lights	5	649	0	0	**654**	-	0	0	0	0	**0**	-	0	728	22	0	**750**	-	15	0	1	0	**16**	-	1420
% Lights	100%	98.6%	0%	0%	**98.6%**	-	0%	0%	0%	0%	**-**	-	0%	99.0%	91.7%	0%	**98.8%**	-	100%	0%	50.0%	0%	**94.1%**	-	98.7%
Single-Unit Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	1	0	**1**	-	6
% Single-Unit Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	50.0%	0%	**5.9%**	-	0.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	5
% Buses	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	2	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	8.3%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (8) Franklin @ John West TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065011, Location: 42.207216, -71.012249

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Franklin Street (Route 37)						Driveway						Franklin Street (Route 37)						John West Leroy Jr Way						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	0	178	0	0	**178**	0	0	0	0	0	**0**	0	0	201	12	0	**213**	0	2	0	0	0	**2**	1	**393**
1:15PM	0	168	0	0	**168**	8	0	0	0	0	**0**	6	0	153	3	0	**156**	0	5	0	0	0	**5**	4	**329**
1:30PM	2	157	0	0	**159**	3	0	0	0	0	**0**	3	0	170	14	0	**184**	0	2	0	0	0	**2**	0	**345**
1:45PM	2	156	0	0	**158**	0	0	0	0	0	**0**	0	0	166	11	0	**177**	0	7	0	3	0	**10**	0	**345**
Total	4	659	0	0	**663**	11	0	0	0	0	**0**	9	0	690	40	0	**730**	0	16	0	3	0	**19**	5	**1412**
% Approach	0.6%	99.4%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	94.5%	5.5%	0%	**-**	-	84.2%	0%	15.8%	0%	**-**	-	**-**
% Total	0.3%	46.7%	0%	0%	**47.0%**	-	0%	0%	0%	0%	**0%**	-	0%	48.9%	2.8%	0%	**51.7%**	-	1.1%	0%	0.2%	0%	**1.3%**	-	**-**
PHF	0.500	0.926	-	-	**0.931**	-	-	-	-	-	**-**	-	-	0.858	0.696	-	**0.860**	-	0.571	-	0.250	-	**0.475**	-	0.900
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	3
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Lights	4	653	0	0	**657**	-	0	0	0	0	**0**	-	0	680	39	0	**719**	-	16	0	3	0	**19**	-	1395
% Lights	100%	99.1%	0%	0%	**99.1%**	-	0%	0%	0%	0%	**-**	-	0%	98.6%	97.5%	0%	**98.5%**	-	100%	0%	100%	0%	**100%**	-	98.8%
Single-Unit Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	7
% Single-Unit Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	5
% Buses	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	2.5%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	63.6%	-	-	-	-	-	33.3%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	36.4%	-	-	-	-	-	66.7%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (9) Franklin @ Washington TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065012, Location: 42.201774, -71.007205

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Franklin Street (Route 37)						Washington Street						Washington Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	0	23	3	0	**26**	0	5	0	17	0	**22**	1	24	83	0	0	**107**	0	0	0	0	0	**0**	1	**155**
6:15AM	0	38	3	0	**41**	0	12	0	19	0	**31**	0	39	102	0	0	**141**	0	0	0	0	0	**0**	0	**213**
6:30AM	0	40	6	0	**46**	0	12	0	27	0	**39**	0	45	120	0	0	**165**	0	0	0	0	0	**0**	0	**250**
6:45AM	0	55	7	0	**62**	0	17	0	45	0	**62**	0	64	157	0	0	**221**	0	0	0	0	0	**0**	0	**345**
Hourly Total	0	156	19	0	**175**	0	46	0	108	0	**154**	1	172	462	0	0	**634**	0	0	0	0	0	**0**	1	**963**
7:00AM	0	62	13	0	**75**	1	36	0	63	0	**99**	0	55	146	0	0	**201**	0	0	0	0	0	**0**	1	**375**
7:15AM	0	65	21	0	**86**	2	37	0	75	0	**112**	0	74	113	0	0	**187**	0	1	0	0	0	**1**	2	**386**
7:30AM	0	59	13	0	**72**	0	15	0	50	0	**65**	0	92	169	0	0	**261**	0	0	1	0	0	**1**	2	**399**
7:45AM	0	78	11	0	**89**	0	27	0	61	0	**88**	0	100	178	0	0	**278**	0	0	0	0	0	**0**	1	**455**
Hourly Total	0	264	58	0	**322**	3	115	0	249	0	**364**	0	321	606	0	0	**927**	0	1	1	0	0	**2**	6	**1615**
8:00AM	0	65	20	0	**85**	0	25	0	52	0	**77**	0	73	154	0	0	**227**	0	0	0	0	0	**0**	2	**389**
8:15AM	0	76	25	0	**101**	2	34	0	60	0	**94**	0	82	131	0	0	**213**	0	0	0	0	0	**0**	2	**408**
8:30AM	0	70	13	0	**83**	0	30	0	54	0	**84**	0	64	173	0	0	**237**	0	0	0	0	0	**0**	0	**404**
8:45AM	0	64	25	0	**89**	0	32	0	47	0	**79**	0	89	108	0	0	**197**	0	0	0	0	0	**0**	0	**365**
Hourly Total	0	275	83	0	**358**	2	121	0	213	0	**334**	0	308	566	0	0	**874**	0	0	0	0	0	**0**	4	**1566**
3:00PM	0	151	42	0	**193**	1	32	0	70	0	**102**	0	80	99	0	0	**179**	0	0	0	0	0	**0**	2	**474**
3:15PM	0	146	52	0	**198**	1	24	0	83	0	**107**	0	69	77	0	0	**146**	0	0	0	0	0	**0**	15	**451**
3:30PM	0	142	37	0	**179**	0	31	0	60	0	**91**	0	84	110	0	0	**194**	0	0	0	0	0	**0**	5	**464**
3:45PM	0	116	37	0	**153**	0	34	0	76	0	**110**	0	73	84	0	0	**157**	1	0	0	0	1	**1**	0	**421**
Hourly Total	0	555	168	0	**723**	2	121	0	289	0	**410**	0	306	370	0	0	**676**	1	0	0	0	1	**1**	22	**1810**
4:00PM	0	152	31	0	**183**	0	32	0	70	0	**102**	0	62	114	0	0	**176**	0	0	0	0	0	**0**	1	**461**
4:15PM	0	148	39	0	**187**	1	32	0	72	0	**104**	0	69	88	0	0	**157**	0	0	0	0	0	**0**	1	**448**
4:30PM	0	118	35	0	**153**	1	31	0	69	0	**100**	0	79	103	0	0	**182**	0	0	0	0	0	**0**	1	**435**
4:45PM	0	107	45	0	**152**	0	39	0	52	0	**91**	0	73	93	0	0	**166**	0	0	0	0	0	**0**	1	**409**
Hourly Total	0	525	150	0	**675**	2	134	0	263	0	**397**	0	283	398	0	0	**681**	0	0	0	0	0	**0**	4	**1753**
5:00PM	1	137	32	0	**170**	1	20	0	90	0	**110**	0	83	90	0	0	**173**	1	0	0	0	0	**0**	0	**453**
5:15PM	0	126	41	0	**167**	4	36	0	88	0	**124**	1	70	107	0	0	**177**	0	0	0	0	0	**0**	5	**468**
5:30PM	0	87	24	0	**111**	0	29	0	49	2	**80**	1	89	94	0	0	**183**	0	0	0	0	0	**0**	0	**374**
5:45PM	0	156	48	0	**204**	1	28	0	73	0	**101**	0	67	76	0	0	**143**	1	0	0	0	0	**0**	2	**448**
Hourly Total	1	506	145	0	**652**	6	113	0	300	2	**415**	2	309	367	0	0	**676**	2	0	0	0	0	**0**	7	**1743**
2023-05-06 11:00AM	0	87	36	0	**123**	0	30	0	54	0	**84**	0	76	121	0	0	**197**	0	0	0	0	0	**0**	0	**404**
11:15AM	0	106	35	0	**141**	0	28	0	55	0	**83**	0	69	122	0	0	**191**	0	0	0	0	0	**0**	0	**415**
11:30AM	0	125	38	0	**163**	2	40	0	44	1	**85**	1	81	110	0	0	**191**	0	0	0	0	0	**0**	0	**439**
11:45AM	0	102	29	0	**131**	4	37	0	65	0	**102**	2	77	157	0	0	**234**	0	0	0	0	0	**0**	0	**467**
Hourly Total	0	420	138	0	**558**	6	135	0	218	1	**354**	3	303	510	0	0	**813**	0	0	0	0	0	**0**	0	**1725**
12:00PM	0	107	36	0	**143**	0	31	0	70	0	**101**	0	82	100	0	0	**182**	0	0	0	0	0	**0**	4	**426**
12:15PM	0	125	45	0	**170**	1	38	0	78	0	**116**	0	63	118	0	0	**181**	0	0	1	0	0	**1**	2	**468**
12:30PM	0	110	44	0	**154**	1	47	0	67	0	**114**	0	56	119	0	0	**175**	0	0	0	0	0	**0**	1	**443**
12:45PM	0	112	42	0	**154**	0	42	1	58	0	**101**	0	77	103	0	0	**180**	0	0	0	0	0	**0**	0	**435**
Hourly Total	0	454	167	0	**621**	2	158	1	273	0	**432**	0	278	440	0	0	**718**	0	0	1	0	0	**1**	7	**1772**
1:00PM	0	132	45	0	**177**	0	37	0	61	0	**98**	0	57	142	0	0	**199**	0	0	0	0	0	**0**	0	**474**
1:15PM	0	118	38	0	**156**	0	39	0	54	0	**93**	1	58	107	0	0	**165**	1	0	0	0	0	**0**	1	**414**
1:30PM	0	119	32	0	**151**	0	38	0	65	0	**103**	0	75	111	0	0	**186**	1	0	0	0	0	**0**	3	**440**
1:45PM	0	124	40	0	**164**	0	30	0	62	0	**92**	1	75	114	0	0	**189**	0	0	0	0	1	**1**	3	**446**
Hourly Total	0	493	155	0	**648**	0	144	0	242	0	**386**	2	265	474	0	0	**739**	2	0	0	0	1	**1**	7	**1774**
Total	1	3648	1083	0	**4732**	23	1087	1	2155	3	**3246**	8	2545	4193	0	0	**6738**	5	1	2	0	2	**5**	58	**14721**
% Approach	0%	77.1%	22.9%	0%	**-**	-	33.5%	0%	66.4%	0.1%	**-**	-	37.8%	62.2%	0%	0%	**-**	-	20.0%	40.0%	0%	40.0%	**-**	-	-
% Total	0%	24.8%	7.4%	0%	**32.1%**	-	7.4%	0%	14.6%	0%	**22.1%**	-	17.3%	28.5%	0%	0%	**45.8%**	-	0%	0%	0%	0%	**0%**	-	-
Motorcycles	0	8	2	0	**10**	-	2	0	6	0	**8**	-	2	3	0	0	**5**	-	0	0	0	0	**0**	-	23
% Motorcycles	0%	0.2%	0.2%	0%	**0.2%**	-	0.2%	0%	0.3%	0%	**0.2%**	-	0.1%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Lights	1	3581	1056	0	**4638**	-	1068	1	2098	3	**3170**	-	2480	4109	0	0	**6589**	-	1	2	0	2	**5**	-	14402
% Lights	100%	98.2%	97.5%	0%	**98.0%**	-	98.3%	100%	97.4%	100%	**97.7%**	-	97.4%	98.0%	0%	0%	**97.8%**	-	100%	100%	0%	100%	**100%**	-	97.8%
Single-Unit Trucks	0	35	8	0	**43**	-	9	0	26	0	**35**	-	35	51	0	0	**86**	-	0	0	0	0	**0**	-	164
% Single-Unit Trucks	0%	1.0%	0.7%	0%	**0.9%**	-	0.8%	0%	1.2%	0%	**1.1%**	-	1.4%	1.2%	0%	0%	**1.3%**	-	0%	0%	0%	0%	**0%**	-	1.1%
Articulated Trucks	0	16	2	0	**18**	-	0	0	5	0	**5**	-	5	19	0	0	**24**	-	0	0	0	0	**0**	-	47
% Articulated Trucks	0%	0.4%	0.2%	0%	**0.4%**	-	0%	0%	0.2%	0%	**0.2%**	-	0.2%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	8	14	0	**22**	-	8	0	20	0	**28**	-	23	9	0	0	**32**	-	0	0	0	0	**0**	-	82

Leg	Franklin Street (Route 37)						Washington Street						Washington Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Buses	0%	0.2%	1.3%	0%	**0.5%**	-	0.7%	0%	0.9%	0%	**0.9%**	-	0.9%	0.2%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.6%
Bicycles on Road	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	0.1%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	21	-	-	-	-	-	7	-	-	-	-	-	5	-	-	-	-	-	50	
% Pedestrians	-	-	-	-	-	91.3%	-	-	-	-	-	87.5%	-	-	-	-	-	100%	-	-	-	-	-	86.2%	-
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	8	
% Bicycles on Crosswalk	-	-	-	-	-	8.7%	-	-	-	-	-	12.5%	-	-	-	-	-	0%	-	-	-	-	-	13.8%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (9) Franklin @ Washington TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065012, Location: 42.201774, -71.007205

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Franklin Street (Route 37)						Washington Street						Washington Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	0	78	11	0	**89**	0	27	0	61	0	**88**	0	100	178	0	0	**278**	0	0	0	0	0	**0**	1	**455**
8:00AM	0	65	20	0	**85**	0	25	0	52	0	**77**	0	73	154	0	0	**227**	0	0	0	0	0	**0**	2	**389**
8:15AM	0	76	25	0	**101**	2	34	0	60	0	**94**	0	82	131	0	0	**213**	0	0	0	0	0	**0**	2	**408**
8:30AM	0	70	13	0	**83**	0	30	0	54	0	**84**	0	64	173	0	0	**237**	0	0	0	0	0	**0**	0	**404**
Total	0	289	69	0	**358**	2	116	0	227	0	**343**	0	319	636	0	0	**955**	0	0	0	0	0	**0**	5	**1656**
% Approach	0%	80.7%	19.3%	0%	**-**	-	33.8%	0%	66.2%	0%	**-**	-	33.4%	66.6%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	17.5%	4.2%	0%	**21.6%**	-	7.0%	0%	13.7%	0%	**20.7%**	-	19.3%	38.4%	0%	0%	**57.7%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	0.926	0.690	-	**0.886**	-	0.853	-	0.930	-	**0.912**	-	0.798	0.893	-	-	**0.859**	-	-	-	-	-	**-**	-	0.910
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Lights	0	279	64	0	**343**	-	111	0	215	0	**326**	-	304	624	0	0	**928**	-	0	0	0	0	**0**	-	1597
% Lights	0%	96.5%	92.8%	0%	**95.8%**	-	95.7%	0%	94.7%	0%	**95.0%**	-	95.3%	98.1%	0%	0%	**97.2%**	-	0%	0%	0%	0%	**-**	-	96.4%
Single-Unit Trucks	0	9	2	0	**11**	-	4	0	6	0	**10**	-	8	10	0	0	**18**	-	0	0	0	0	**0**	-	39
% Single-Unit Trucks	0%	3.1%	2.9%	0%	**3.1%**	-	3.4%	0%	2.6%	0%	**2.9%**	-	2.5%	1.6%	0%	0%	**1.9%**	-	0%	0%	0%	0%	**-**	-	2.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2	0	0	0	**2**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.6%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0.2%
Buses	0	0	3	0	**3**	-	1	0	6	0	**7**	-	5	2	0	0	**7**	-	0	0	0	0	**0**	-	17
% Buses	0%	0%	4.3%	0%	**0.8%**	-	0.9%	0%	2.6%	0%	**2.0%**	-	1.6%	0.3%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	1.0%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (9) Franklin @ Washington TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 3PM - 4 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065012, Location: 42.201774, -71.007205

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Franklin Street (Route 37) Southbound						Washington Street Westbound						Washington Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 3:00PM	0	151	42	0	**193**	1	32	0	70	0	**102**	0	80	99	0	0	**179**	0	0	0	0	0	**0**	2	**474**
3:15PM	0	146	52	0	**198**	1	24	0	83	0	**107**	0	69	77	0	0	**146**	0	0	0	0	0	**0**	15	**451**
3:30PM	0	142	37	0	**179**	0	31	0	60	0	**91**	0	84	110	0	0	**194**	0	0	0	0	0	**0**	5	**464**
3:45PM	0	116	37	0	**153**	0	34	0	76	0	**110**	0	73	84	0	0	**157**	1	0	0	0	1	**1**	0	**421**
Total	0	555	168	0	**723**	2	121	0	289	0	**410**	0	306	370	0	0	**676**	1	0	0	0	1	**1**	22	**1810**
% Approach	0%	76.8%	23.2%	0%	**-**	-	29.5%	0%	70.5%	0%	**-**	-	45.3%	54.7%	0%	0%	**-**	-	0%	0%	0%	100%	**-**	-	-
% Total	0%	30.7%	9.3%	0%	**39.9%**	-	6.7%	0%	16.0%	0%	**22.7%**	-	16.9%	20.4%	0%	0%	**37.3%**	-	0%	0%	0%	0.1%	**0.1%**	-	-
PHF	-	0.919	0.808	-	**0.913**	-	0.890	-	0.870	-	**0.932**	-	0.911	0.841	-	-	**0.871**	-	-	-	-	0.250	**0.250**	-	0.955
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	0	550	164	0	**714**	-	118	0	281	0	**399**	-	299	358	0	0	**657**	-	0	0	0	1	**1**	-	1771
% Lights	0%	99.1%	97.6%	0%	**98.8%**	-	97.5%	0%	97.2%	0%	**97.3%**	-	97.7%	96.8%	0%	0%	**97.2%**	-	0%	0%	0%	100%	**100%**	-	97.8%
Single-Unit Trucks	0	2	1	0	**3**	-	2	0	5	0	**7**	-	3	8	0	0	**11**	-	0	0	0	0	**0**	-	21
% Single-Unit Trucks	0%	0.4%	0.6%	0%	**0.4%**	-	1.7%	0%	1.7%	0%	**1.7%**	-	1.0%	2.2%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	0	1	0	0	**1**	-	0	0	1	0	**1**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	4
% Articulated Trucks	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0.3%	0%	**0.2%**	-	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	2	3	0	**5**	-	1	0	2	0	**3**	-	4	2	0	0	**6**	-	0	0	0	0	**0**	-	14
% Buses	0%	0.4%	1.8%	0%	**0.7%**	-	0.8%	0%	0.7%	0%	**0.7%**	-	1.3%	0.5%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0.8%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	22	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (9) Franklin @ Washington TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065012, Location: 42.201774, -71.007205

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Franklin Street (Route 37) Southbound						Washington Street Westbound						Washington Street (Route 37) Northbound						Driveway Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	0	125	45	0	**170**	1	38	0	78	0	**116**	0	63	118	0	0	**181**	0	0	1	0	0	**1**	2	**468**
12:30PM	0	110	44	0	**154**	1	47	0	67	0	**114**	0	56	119	0	0	**175**	0	0	0	0	0	**0**	1	**443**
12:45PM	0	112	42	0	**154**	0	42	1	58	0	**101**	0	77	103	0	0	**180**	0	0	0	0	0	**0**	0	**435**
1:00PM	0	132	45	0	**177**	0	37	0	61	0	**98**	0	57	142	0	0	**199**	0	0	0	0	0	**0**	0	**474**
Total	0	479	176	0	**655**	2	164	1	264	0	**429**	0	253	482	0	0	**735**	0	0	1	0	0	**1**	3	**1820**
% Approach	0%	73.1%	26.9%	0%	**-**	-	38.2%	0.2%	61.5%	0%	**-**	-	34.4%	65.6%	0%	0%	**-**	-	0%	100%	0%	0%	**-**	-	-
% Total	0%	26.3%	9.7%	0%	**36.0%**	-	9.0%	0.1%	14.5%	0%	**23.6%**	-	13.9%	26.5%	0%	0%	**40.4%**	-	0%	0.1%	0%	0%	**0.1%**	-	-
PHF	-	0.907	0.978	-	**0.925**	-	0.872	0.250	0.846	-	**0.925**	-	0.821	0.849	-	-	**0.923**	-	-	0.250	-	-	**0.250**	-	0.960
Motorcycles	0	3	0	0	**3**	-	0	0	3	0	**3**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	7
% Motorcycles	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	1.1%	0%	**0.7%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Lights	0	472	175	0	**647**	-	163	1	259	0	**423**	-	251	476	0	0	**727**	-	0	1	0	0	**1**	-	1798
% Lights	0%	98.5%	99.4%	0%	**98.8%**	-	99.4%	100%	98.1%	0%	**98.6%**	-	99.2%	98.8%	0%	0%	**98.9%**	-	0%	100%	0%	0%	**100%**	-	98.8%
Single-Unit Trucks	0	2	0	0	**2**	-	0	0	1	0	**1**	-	2	2	0	0	**4**	-	0	0	0	0	**0**	-	7
% Single-Unit Trucks	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0.4%	0%	**0.2%**	-	0.8%	0.4%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	1	1	0	**2**	-	1	0	1	0	**2**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	5
% Buses	0%	0.2%	0.6%	0%	**0.3%**	-	0.6%	0%	0.4%	0%	**0.5%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.3%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66.7%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (9) Franklin @ Washington TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065012, Location: 42.201774, -71.007205

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Franklin Street (Route 37)						Washington Street						Washington Street (Route 37)						Driveway						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	0	132	45	0	**177**	0	37	0	61	0	**98**	0	57	142	0	0	**199**	0	0	0	0	0	**0**	0	**474**
1:15PM	0	118	38	0	**156**	0	39	0	54	0	**93**	1	58	107	0	0	**165**	1	0	0	0	0	**0**	1	**414**
1:30PM	0	119	32	0	**151**	0	38	0	65	0	**103**	0	75	111	0	0	**186**	1	0	0	0	0	**0**	3	**440**
1:45PM	0	124	40	0	**164**	0	30	0	62	0	**92**	1	75	114	0	0	**189**	0	0	0	0	1	**1**	3	**446**
Total	0	493	155	0	**648**	0	144	0	242	0	**386**	2	265	474	0	0	**739**	2	0	0	0	1	**1**	7	**1774**
% Approach	0%	76.1%	23.9%	0%	**-**	-	37.3%	0%	62.7%	0%	**-**	-	35.9%	64.1%	0%	0%	**-**	-	0%	0%	0%	100%	**-**	-	-
% Total	0%	27.8%	8.7%	0%	**36.5%**	-	8.1%	0%	13.6%	0%	**21.8%**	-	14.9%	26.7%	0%	0%	**41.7%**	-	0%	0%	0%	0.1%	**0.1%**	-	-
PHF	-	0.934	0.861	-	**0.915**	-	0.923	-	0.931	-	**0.937**	-	0.883	0.831	-	-	**0.926**	-	-	-	-	0.250	**0.250**	-	0.935
Motorcycles	0	1	0	0	**1**	-	2	0	2	0	**4**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	6
% Motorcycles	0%	0.2%	0%	0%	**0.2%**	-	1.4%	0%	0.8%	0%	**1.0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Lights	0	487	154	0	**641**	-	141	0	240	0	**381**	-	261	469	0	0	**730**	-	0	0	0	1	**1**	-	1753
% Lights	0%	98.8%	99.4%	0%	**98.9%**	-	97.9%	0%	99.2%	0%	**98.7%**	-	98.5%	98.9%	0%	0%	**98.8%**	-	0%	0%	0%	100%	**100%**	-	98.8%
Single-Unit Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	4	1	0	0	**5**	-	0	0	0	0	**0**	-	8
% Single-Unit Trucks	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	1.5%	0.2%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	1	1	0	**2**	-	1	0	0	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	4
% Buses	0%	0.2%	0.6%	0%	**0.3%**	-	0.7%	0%	0%	0%	**0.3%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	100%	-	-	-	-	-	85.7%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	0%	-	-	-	-	-	14.3%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (10) Washington @ Frederick TMC - TMC

Thu May 4, 2023
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065013, Location: 42.19993, -71.007548

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Frederick Road Westbound						Washington Street (Route 37) Northbound						Pond Street Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	23	19	0	0	**42**	0	0	0	0	0	**0**	1	0	84	22	0	**106**	3	11	6	20	0	**37**	0	**185**
6:15AM	25	30	0	0	**55**	1	0	0	0	0	**0**	2	1	107	37	0	**145**	0	7	3	32	0	**42**	1	**242**
6:30AM	30	40	0	0	**70**	0	0	0	0	0	**0**	0	0	129	30	0	**159**	0	36	2	42	0	**80**	0	**309**
6:45AM	55	44	0	0	**99**	0	0	0	0	0	**0**	0	0	155	64	0	**219**	0	28	7	62	0	**97**	0	**415**
Hourly Total	133	133	0	0	**266**	1	0	0	0	0	**0**	3	1	475	153	0	**629**	3	82	18	156	0	**256**	1	**1151**
7:00AM	76	46	1	0	**123**	0	0	0	0	1	**1**	0	0	158	115	0	**273**	0	48	6	50	0	**104**	1	**501**
7:15AM	82	55	1	0	**138**	0	0	0	0	0	**0**	0	0	109	153	0	**262**	0	55	2	72	0	**129**	2	**529**
7:30AM	46	64	1	0	**111**	1	0	0	0	0	**0**	1	2	165	75	0	**242**	0	69	13	87	0	**169**	1	**522**
7:45AM	64	71	0	0	**135**	0	0	0	0	0	**0**	0	1	167	90	0	**258**	0	70	9	110	0	**189**	0	**582**
Hourly Total	268	236	3	0	**507**	1	0	0	0	1	**1**	1	3	599	433	0	**1035**	0	242	30	319	0	**591**	4	**2134**
8:00AM	60	57	0	0	**117**	0	0	0	0	0	**0**	0	1	162	56	0	**219**	0	45	3	69	0	**117**	0	**453**
8:15AM	63	71	1	0	**135**	0	0	0	0	0	**0**	0	0	146	77	0	**223**	0	52	9	72	0	**133**	0	**491**
8:30AM	61	57	0	0	**118**	0	0	0	0	0	**0**	0	0	161	83	0	**244**	0	48	10	64	0	**122**	0	**484**
8:45AM	53	60	0	0	**113**	0	0	0	0	0	**0**	2	2	124	53	0	**179**	2	52	7	84	0	**143**	0	**435**
Hourly Total	237	245	1	0	**483**	0	0	0	0	0	**0**	2	3	593	269	0	**865**	2	197	29	289	0	**515**	0	**1863**
3:00PM	84	127	1	0	**212**	0	0	0	0	0	**0**	0	1	99	72	0	**172**	0	82	21	78	0	**181**	0	**565**
3:15PM	83	159	1	0	**243**	0	0	0	0	0	**0**	0	1	90	54	0	**145**	0	71	15	57	0	**143**	0	**531**
3:30PM	72	120	0	0	**192**	0	0	0	0	0	**0**	0	1	112	58	0	**171**	0	74	19	81	0	**174**	4	**537**
3:45PM	68	115	3	0	**186**	0	0	0	0	0	**0**	0	2	90	55	0	**147**	0	74	20	65	0	**159**	0	**492**
Hourly Total	307	521	5	0	**833**	0	0	0	0	0	**0**	0	5	391	239	0	**635**	0	301	75	281	0	**657**	4	**2125**
4:00PM	79	142	1	0	**222**	2	0	0	0	0	**0**	0	0	121	68	0	**189**	0	55	7	64	0	**126**	2	**537**
4:15PM	81	148	0	0	**229**	1	0	0	0	0	**0**	0	1	82	62	0	**145**	0	68	10	62	0	**140**	1	**514**
4:30PM	66	101	9	0	**176**	0	0	0	0	0	**0**	0	1	104	68	0	**173**	0	69	33	89	0	**191**	1	**540**
4:45PM	58	108	4	0	**170**	1	0	0	0	0	**0**	1	3	86	85	0	**174**	0	73	28	79	0	**180**	0	**524**
Hourly Total	284	499	14	0	**797**	4	0	0	0	0	**0**	1	5	393	283	0	**681**	0	265	78	294	0	**637**	4	**2115**
5:00PM	96	124	2	0	**222**	0	0	0	0	0	**0**	0	0	91	64	0	**155**	0	72	28	80	0	**180**	0	**557**
5:15PM	98	110	3	0	**211**	0	0	0	0	0	**0**	1	2	103	87	0	**192**	0	39	27	78	0	**144**	0	**547**
5:30PM	59	70	4	0	**133**	1	0	0	0	0	**0**	0	2	92	69	0	**163**	0	68	26	93	0	**187**	2	**483**
5:45PM	79	145	3	0	**227**	1	0	0	0	0	**0**	0	2	84	70	0	**156**	0	66	13	59	0	**138**	0	**521**
Hourly Total	332	449	12	0	**793**	2	0	0	0	0	**0**	1	6	370	290	0	**666**	0	245	94	310	0	**649**	2	**2108**
2023-05-06 11:00AM	60	95	2	0	**157**	1	0	0	0	0	**0**	0	3	140	52	0	**195**	0	62	8	70	0	**140**	0	**492**
11:15AM	51	103	1	0	**155**	1	0	0	0	0	**0**	0	2	140	52	0	**194**	0	42	7	48	0	**97**	0	**446**
11:30AM	60	102	0	0	**162**	0	0	0	0	0	**0**	2	0	124	53	0	**177**	0	52	3	82	0	**137**	0	**476**
11:45AM	62	85	2	0	**149**	0	0	0	0	0	**0**	2	0	153	66	0	**219**	0	62	12	67	0	**141**	1	**509**
Hourly Total	233	385	5	0	**623**	2	0	0	0	0	**0**	4	5	557	223	0	**785**	0	218	30	267	0	**515**	1	**1923**
12:00PM	72	103	2	0	**177**	0	0	0	0	0	**0**	0	0	100	50	0	**150**	0	63	10	82	0	**155**	2	**482**
12:15PM	76	125	4	0	**205**	1	0	0	0	0	**0**	0	0	128	46	0	**174**	0	51	8	57	0	**116**	0	**495**
12:30PM	73	105	0	0	**178**	0	0	0	0	0	**0**	0	1	126	46	0	**173**	0	60	5	51	0	**116**	1	**467**
12:45PM	58	110	1	0	**169**	0	0	0	0	0	**0**	0	0	121	62	0	**183**	0	53	6	63	0	**122**	0	**474**
Hourly Total	279	443	7	0	**729**	1	0	0	0	0	**0**	0	1	475	204	0	**680**	0	227	29	253	0	**509**	3	**1918**
1:00PM	61	131	2	0	**194**	0	0	0	0	0	**0**	0	0	130	55	0	**185**	0	66	4	62	0	**132**	0	**511**
1:15PM	57	110	2	0	**169**	0	0	0	0	0	**0**	1	1	120	36	0	**157**	0	45	7	54	0	**106**	0	**432**
1:30PM	77	116	3	0	**196**	0	0	0	0	0	**0**	1	2	125	41	0	**168**	0	47	7	64	0	**118**	0	**482**
1:45PM	67	115	1	0	**183**	0	0	0	0	0	**0**	1	0	118	46	0	**164**	0	54	7	77	0	**138**	1	**485**
Hourly Total	262	472	8	0	**742**	0	0	0	0	0	**0**	3	3	493	178	0	**674**	0	212	25	257	0	**494**	1	**1910**
Total	2335	3383	55	0	**5773**	11	0	0	0	1	**1**	15	32	4346	2272	0	**6650**	5	1989	408	2426	0	**4823**	20	**17247**
% Approach	40.4%	58.6%	1.0%	0%	**-**	-	0%	0%	0%	100%	**-**	-	0.5%	65.4%	34.2%	0%	**-**	-	41.2%	8.5%	50.3%	0%	**-**	-	-
% Total	13.5%	19.6%	0.3%	0%	**33.5%**	-	0%	0%	0%	0%	**0%**	-	0.2%	25.2%	13.2%	0%	**38.6%**	-	11.5%	2.4%	14.1%	0%	**28.0%**	-	-
Motorcycles	3	8	0	0	**11**	-	0	0	0	0	**0**	-	0	3	3	0	**6**	-	3	1	3	0	**7**	-	24
% Motorcycles	0.1%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0.1%	0%	**0.1%**	-	0.2%	0.2%	0.1%	0%	**0.1%**	-	0.1%
Lights	2278	3321	54	0	**5653**	-	0	0	0	1	**1**	-	30	4266	2205	0	**6501**	-	1933	401	2360	0	**4694**	-	16849
% Lights	97.6%	98.2%	98.2%	0%	**97.9%**	-	0%	0%	0%	100%	**100%**	-	93.8%	98.2%	97.1%	0%	**97.8%**	-	97.2%	98.3%	97.3%	0%	**97.3%**	-	97.7%
Single-Unit Trucks	27	35	1	0	**63**	-	0	0	0	0	**0**	-	1	51	31	0	**83**	-	22	4	30	0	**56**	-	202
% Single-Unit Trucks	1.2%	1.0%	1.8%	0%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	3.1%	1.2%	1.4%	0%	**1.2%**	-	1.1%	1.0%	1.2%	0%	**1.2%**	-	1.2%
Articulated Trucks	3	14	0	0	**17**	-	0	0	0	0	**0**	-	0	18	6	0	**24**	-	6	1	11	0	**18**	-	59
% Articulated Trucks	0.1%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0.3%	0%	**0.4%**	-	0.3%	0.2%	0.5%	0%	**0.4%**	-	0.3%

Leg	Washington Street (Route 37)						Frederick Road						Washington Street (Route 37)						Pond Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Buses	21	5	0	0	**26**	-	0	0	0	0	**0**	-	1	5	27	0	**33**	-	24	1	22	0	**47**	-	106
% Buses	0.9%	0.1%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	3.1%	0.1%	1.2%	0%	**0.5%**	-	1.2%	0.2%	0.9%	0%	**1.0%**	-	0.6%
Bicycles on Road	3	0	0	0	**3**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	1	0	0	0	**1**	-	7
% Bicycles on Road	0.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0%**	-	0.1%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	14	-	-	-	-	-	4	-	-	-	-	-	15	
% Pedestrians	-	-	-	-	-	63.6%	-	-	-	-	-	93.3%	-	-	-	-	-	80.0%	-	-	-	-	-	75.0%	-
Bicycles on Crosswalk	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	5	
% Bicycles on Crosswalk	-	-	-	-	-	36.4%	-	-	-	-	-	6.7%	-	-	-	-	-	20.0%	-	-	-	-	-	25.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (10) Washington @ Frederick TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7AM - 8 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065013, Location: 42.19993, -71.007548

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Frederick Road						Washington Street (Route 37)						Pond Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 7:00AM	76	46	1	0	**123**	0	0	0	0	1	**1**	0	0	158	115	0	**273**	0	48	6	50	0	**104**	1	**501**
7:15AM	82	55	1	0	**138**	0	0	0	0	0	**0**	0	0	109	153	0	**262**	0	55	2	72	0	**129**	2	**529**
7:30AM	46	64	1	0	**111**	1	0	0	0	0	**0**	1	2	165	75	0	**242**	0	69	13	87	0	**169**	1	**522**
7:45AM	64	71	0	0	**135**	0	0	0	0	0	**0**	0	1	167	90	0	**258**	0	70	9	110	0	**189**	0	**582**
Total	268	236	3	0	**507**	1	0	0	0	1	**1**	1	3	599	433	0	**1035**	0	242	30	319	0	**591**	4	**2134**
% Approach	52.9%	46.5%	0.6%	0%	**-**	-	0%	0%	0%	100%	**-**	-	0.3%	57.9%	41.8%	0%	**-**	-	40.9%	5.1%	54.0%	0%	**-**	-	**-**
% Total	12.6%	11.1%	0.1%	0%	**23.8%**	-	0%	0%	0%	0%	**0%**	-	0.1%	28.1%	20.3%	0%	**48.5%**	-	11.3%	1.4%	14.9%	0%	**27.7%**	-	**-**
PHF	0.814	0.831	0.750	-	**0.917**	-	-	-	-	0.250	**0.250**	-	0.375	0.897	0.708	-	**0.948**	-	0.864	0.577	0.725	-	**0.782**	-	0.916
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	254	225	3	0	**482**	-	0	0	0	1	**1**	-	3	577	417	0	**997**	-	221	30	305	0	**556**	-	2036
% Lights	94.8%	95.3%	100%	0%	**95.1%**	-	0%	0%	0%	100%	**100%**	-	100%	96.3%	96.3%	0%	**96.3%**	-	91.3%	100%	95.6%	0%	**94.1%**	-	95.4%
Single-Unit Trucks	2	4	0	0	**6**	-	0	0	0	0	**0**	-	0	16	5	0	**21**	-	5	0	5	0	**10**	-	37
% Single-Unit Trucks	0.7%	1.7%	0%	0%	**1.2%**	-	0%	0%	0%	0%	**0%**	-	0%	2.7%	1.2%	0%	**2.0%**	-	2.1%	0%	1.6%	0%	**1.7%**	-	1.7%
Articulated Trucks	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	5	1	0	**6**	-	3	0	1	0	**4**	-	15
% Articulated Trucks	0%	2.1%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0.2%	0%	**0.6%**	-	1.2%	0%	0.3%	0%	**0.7%**	-	0.7%
Buses	11	2	0	0	**13**	-	0	0	0	0	**0**	-	0	1	10	0	**11**	-	13	0	8	0	**21**	-	45
% Buses	4.1%	0.8%	0%	0%	**2.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	2.3%	0%	**1.1%**	-	5.4%	0%	2.5%	0%	**3.6%**	-	2.1%
Bicycles on Road	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0.4%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (10) Washington @ Frederick TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065013, Location: 42.19993, -71.007548

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Frederick Road						Washington Street (Route 37)						Pond Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	66	101	9	0	**176**	0	0	0	0	0	**0**	0	1	104	68	0	**173**	0	69	33	89	0	**191**	1	**540**
4:45PM	58	108	4	0	**170**	1	0	0	0	0	**0**	1	3	86	85	0	**174**	0	73	28	79	0	**180**	0	**524**
5:00PM	96	124	2	0	**222**	0	0	0	0	0	**0**	0	0	91	64	0	**155**	0	72	28	80	0	**180**	0	**557**
5:15PM	98	110	3	0	**211**	0	0	0	0	0	**0**	1	2	103	87	0	**192**	0	39	27	78	0	**144**	0	**547**
Total	318	443	18	0	**779**	1	0	0	0	0	**0**	2	6	384	304	0	**694**	0	253	116	326	0	**695**	1	**2168**
% Approach	40.8%	56.9%	2.3%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.9%	55.3%	43.8%	0%	**-**	-	36.4%	16.7%	46.9%	0%	**-**	-	**-**
% Total	14.7%	20.4%	0.8%	0%	**35.9%**	-	0%	0%	0%	0%	**0%**	-	0.3%	17.7%	14.0%	0%	**32.0%**	-	11.7%	5.4%	15.0%	0%	**32.1%**	-	**-**
PHF	0.817	0.893	0.500	-	**0.876**	-	-	-	-	-	**-**	-	0.500	0.923	0.874	-	**0.904**	-	0.866	0.879	0.916	-	**0.910**	-	0.973
Motorcycles	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	3
% Motorcycles	0.3%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0.3%	0%	**0.3%**	-	0.1%
Lights	309	440	18	0	**767**	-	0	0	0	0	**0**	-	6	379	298	0	**683**	-	251	115	323	0	**689**	-	2139
% Lights	97.2%	99.3%	100%	0%	**98.5%**	-	0%	0%	0%	0%	**-**	-	100%	98.7%	98.0%	0%	**98.4%**	-	99.2%	99.1%	99.1%	0%	**99.1%**	-	98.7%
Single-Unit Trucks	5	2	0	0	**7**	-	0	0	0	0	**0**	-	0	4	4	0	**8**	-	1	0	0	0	**1**	-	16
% Single-Unit Trucks	1.6%	0.5%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	0%	1.0%	1.3%	0%	**1.2%**	-	0.4%	0%	0%	0%	**0.1%**	-	0.7%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0.3%	0.3%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	2	0	0	0	**2**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	1	0	2	0	**3**	-	6
% Buses	0.6%	0%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0.3%	0%	**0.1%**	-	0.4%	0%	0.6%	0%	**0.4%**	-	0.3%
Bicycles on Road	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0.3%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (10) Washington @ Frederick TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 11:30AM - 12:30 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065013, Location: 42.19993, -71.007548

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Washington Street (Route 37) Southbound						Frederick Road Westbound						Washington Street (Route 37) Northbound						Pond Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 11:30AM	60	102	0	0	**162**	0	0	0	0	0	**0**	2	0	124	53	0	**177**	0	52	3	82	0	**137**	0	**476**
11:45AM	62	85	2	0	**149**	0	0	0	0	0	**0**	2	0	153	66	0	**219**	0	62	12	67	0	**141**	1	**509**
12:00PM	72	103	2	0	**177**	0	0	0	0	0	**0**	0	0	100	50	0	**150**	0	63	10	82	0	**155**	2	**482**
12:15PM	76	125	4	0	**205**	1	0	0	0	0	**0**	0	0	128	46	0	**174**	0	51	8	57	0	**116**	0	**495**
Total	270	415	8	0	**693**	1	0	0	0	0	**0**	4	0	505	215	0	**720**	0	228	33	288	0	**549**	3	**1962**
% Approach	39.0%	59.9%	1.2%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	70.1%	29.9%	0%	**-**	-	41.5%	6.0%	52.5%	0%	**-**	-	-
% Total	13.8%	21.2%	0.4%	0%	**35.3%**	-	0%	0%	0%	0%	**0%**	-	0%	25.7%	11.0%	0%	**36.7%**	-	11.6%	1.7%	14.7%	0%	**28.0%**	-	-
PHF	0.888	0.830	0.500	-	**0.845**	-	-	-	-	-	**-**	-	-	0.825	0.814	-	**0.822**	-	0.905	0.688	0.878	-	**0.885**	-	0.964
Motorcycles	1	2	0	0	**3**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	2	0	1	0	**3**	-	8
% Motorcycles	0.4%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0.5%	0%	**0.3%**	-	0.9%	0%	0.3%	0%	**0.5%**	-	0.4%
Lights	266	407	8	0	**681**	-	0	0	0	0	**0**	-	0	500	211	0	**711**	-	224	32	281	0	**537**	-	1929
% Lights	98.5%	98.1%	100%	0%	**98.3%**	-	0%	0%	0%	0%	**-**	-	0%	99.0%	98.1%	0%	**98.8%**	-	98.2%	97.0%	97.6%	0%	**97.8%**	-	98.3%
Single-Unit Trucks	3	4	0	0	**7**	-	0	0	0	0	**0**	-	0	3	2	0	**5**	-	1	1	3	0	**5**	-	17
% Single-Unit Trucks	1.1%	1.0%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**-**	-	0%	0.6%	0.9%	0%	**0.7%**	-	0.4%	3.0%	1.0%	0%	**0.9%**	-	0.9%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	3	0	**3**	-	6
% Articulated Trucks	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	1.0%	0%	**0.5%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	1	0	0	0	**1**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0.5%	0%	**0.1%**	-	0.4%	0%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	66.7%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	33.3%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (10) Washington @ Frederick TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065013, Location: 42.19993, -71.007548

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Frederick Road						Washington Street (Route 37)						Pond Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	61	131	2	0	**194**	0	0	0	0	0	**0**	0	0	130	55	0	**185**	0	66	4	62	0	**132**	0	**511**
1:15PM	57	110	2	0	**169**	0	0	0	0	0	**0**	1	1	120	36	0	**157**	0	45	7	54	0	**106**	0	**432**
1:30PM	77	116	3	0	**196**	0	0	0	0	0	**0**	1	2	125	41	0	**168**	0	47	7	64	0	**118**	0	**482**
1:45PM	67	115	1	0	**183**	0	0	0	0	0	**0**	1	0	118	46	0	**164**	0	54	7	77	0	**138**	1	**485**
Total	262	472	8	0	**742**	0	0	0	0	0	**0**	3	3	493	178	0	**674**	0	212	25	257	0	**494**	1	**1910**
% Approach	35.3%	63.6%	1.1%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.4%	73.1%	26.4%	0%	**-**	-	42.9%	5.1%	52.0%	0%	**-**	-	-
% Total	13.7%	24.7%	0.4%	0%	**38.8%**	-	0%	0%	0%	0%	**0%**	-	0.2%	25.8%	9.3%	0%	**35.3%**	-	11.1%	1.3%	13.5%	0%	**25.9%**	-	-
PHF	0.851	0.901	0.667	-	**0.946**	-	-	-	-	-	**-**	-	0.375	0.944	0.809	-	**0.908**	-	0.803	0.893	0.834	-	**0.895**	-	0.933
Motorcycles	1	1	0	0	**2**	-	0	0	0	0	**0**	-	0	1	2	0	**3**	-	1	0	0	0	**1**	-	6
% Motorcycles	0.4%	0.2%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	1.1%	0%	**0.4%**	-	0.5%	0%	0%	0%	**0.2%**	-	0.3%
Lights	261	467	8	0	**736**	-	0	0	0	0	**0**	-	2	489	173	0	**664**	-	209	25	253	0	**487**	-	1887
% Lights	99.6%	98.9%	100%	0%	**99.2%**	-	0%	0%	0%	0%	**-**	-	66.7%	99.2%	97.2%	0%	**98.5%**	-	98.6%	100%	98.4%	0%	**98.6%**	-	98.8%
Single-Unit Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	1	1	0	0	**2**	-	1	0	2	0	**3**	-	7
% Single-Unit Trucks	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	33.3%	0.2%	0%	0%	**0.3%**	-	0.5%	0%	0.8%	0%	**0.6%**	-	0.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	2	0	**2**	-	1	0	0	0	**1**	-	4
% Articulated Trucks	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	1.1%	0%	**0.3%**	-	0.5%	0%	0%	0%	**0.2%**	-	0.2%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	0	2	0	**2**	-	4
% Buses	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0.6%	0%	**0.1%**	-	0%	0%	0.8%	0%	**0.4%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (11) Washington @ Hancock TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065017, Location: 42.196203, -71.005172

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	0	19	3	0	**22**	0	6	42	7	0	**55**	0	26	100	57	0	**183**	0	12	12	0	0	**24**	0	**284**
6:15AM	0	33	4	0	**37**	0	6	45	18	0	**69**	0	28	114	62	0	**204**	0	16	17	1	0	**34**	0	**344**
6:30AM	0	47	11	0	**58**	0	7	46	23	0	**76**	0	35	127	80	0	**242**	0	34	29	0	0	**63**	1	**439**
6:45AM	0	39	11	0	**50**	0	19	83	32	0	**134**	0	54	150	105	0	**309**	1	32	28	0	0	**60**	0	**553**
Hourly Total	0	138	29	0	**167**	0	38	216	80	0	**334**	0	143	491	304	0	**938**	1	94	86	1	0	**181**	1	**1620**
7:00AM	0	35	8	0	**43**	0	11	115	21	0	**147**	0	51	113	118	0	**282**	0	39	43	0	0	**82**	0	**554**
7:15AM	2	48	11	0	**61**	0	12	111	20	0	**143**	0	34	116	77	0	**227**	0	51	46	2	0	**99**	0	**530**
7:30AM	1	43	17	0	**61**	0	11	103	25	0	**139**	0	51	117	94	0	**262**	0	64	44	1	0	**109**	0	**571**
7:45AM	0	82	11	0	**93**	0	7	103	36	0	**146**	1	55	112	118	0	**285**	0	67	54	2	0	**123**	0	**647**
Hourly Total	3	208	47	0	**258**	0	41	432	102	0	**575**	1	191	458	407	0	**1056**	0	221	187	5	0	**413**	0	**2302**
8:00AM	1	58	15	0	**74**	1	11	89	32	0	**132**	0	41	99	93	0	**233**	0	48	48	1	0	**97**	0	**536**
8:15AM	3	70	17	0	**90**	0	15	86	17	0	**118**	0	47	123	98	0	**268**	0	48	37	0	0	**85**	0	**561**
8:30AM	1	68	25	0	**94**	0	18	112	31	0	**161**	0	52	96	105	0	**253**	0	68	44	2	0	**114**	0	**622**
8:45AM	1	54	33	0	**88**	1	14	71	31	0	**116**	0	56	80	86	0	**222**	0	53	41	1	0	**95**	0	**521**
Hourly Total	6	250	90	0	**346**	2	58	358	111	0	**527**	0	196	398	382	0	**976**	0	217	170	4	0	**391**	0	**2240**
3:00PM	3	66	28	0	**97**	0	10	64	59	0	**133**	0	66	93	86	0	**245**	1	95	83	0	0	**178**	0	**653**
3:15PM	0	104	22	0	**126**	0	12	73	48	0	**133**	0	48	56	54	0	**158**	0	83	94	0	0	**177**	1	**594**
3:30PM	4	86	44	0	**134**	1	11	92	46	0	**149**	0	45	85	61	0	**191**	1	95	75	0	0	**170**	2	**644**
3:45PM	2	95	58	0	**155**	0	25	74	41	0	**140**	0	44	84	49	0	**177**	0	95	76	0	0	**171**	0	**643**
Hourly Total	9	351	152	0	**512**	1	58	303	194	0	**555**	0	203	318	250	0	**771**	2	368	328	0	0	**696**	3	**2534**
4:00PM	2	96	39	0	**137**	0	15	97	51	0	**163**	0	36	56	64	0	**156**	0	105	94	1	0	**200**	0	**656**
4:15PM	1	118	33	0	**152**	0	13	80	44	0	**137**	0	58	87	54	0	**199**	0	87	66	1	0	**154**	0	**642**
4:30PM	3	92	50	0	**145**	0	17	92	59	0	**168**	0	40	70	60	0	**170**	0	99	76	0	0	**175**	0	**658**
4:45PM	1	134	49	0	**184**	0	12	92	43	0	**147**	0	49	90	56	0	**195**	0	78	79	0	0	**157**	0	**683**
Hourly Total	7	440	171	0	**618**	0	57	361	197	0	**615**	0	183	303	234	0	**720**	0	369	315	2	0	**686**	0	**2639**
5:00PM	1	77	32	0	**110**	0	10	78	58	0	**146**	0	47	83	74	0	**204**	3	105	76	0	0	**181**	0	**641**
5:15PM	4	95	65	0	**164**	0	15	95	54	0	**164**	0	39	86	78	0	**203**	0	75	66	0	0	**141**	0	**672**
5:30PM	2	136	41	0	**179**	0	13	87	48	0	**148**	0	44	77	51	0	**172**	1	64	62	0	0	**126**	0	**625**
5:45PM	2	92	33	0	**127**	0	20	87	40	0	**147**	0	41	93	58	0	**192**	0	95	75	0	0	**170**	0	**636**
Hourly Total	9	400	171	0	**580**	0	58	347	200	0	**605**	0	171	339	261	0	**771**	4	339	279	0	0	**618**	0	**2574**
2023-05-06 11:00AM	3	67	23	0	**93**	1	11	77	27	0	**115**	0	40	87	89	0	**216**	0	78	55	2	0	**135**	2	**559**
11:15AM	6	86	20	0	**112**	1	19	74	43	0	**136**	0	39	76	71	0	**186**	0	97	54	1	0	**152**	1	**586**
11:30AM	4	92	17	0	**113**	1	18	79	37	0	**134**	0	46	81	85	0	**212**	0	87	71	5	0	**163**	0	**622**
11:45AM	4	86	19	0	**109**	1	24	78	43	0	**145**	0	58	95	104	0	**257**	0	74	60	3	0	**137**	1	**648**
Hourly Total	17	331	79	0	**427**	4	72	308	150	0	**530**	0	183	339	349	0	**871**	0	336	240	11	0	**587**	4	**2415**
12:00PM	2	83	19	0	**104**	0	19	59	36	0	**114**	0	48	88	67	0	**203**	2	89	79	1	0	**169**	0	**590**
12:15PM	4	89	21	0	**114**	0	16	73	44	0	**133**	0	38	80	78	0	**196**	0	91	63	2	0	**156**	2	**599**
12:30PM	1	93	25	0	**119**	0	12	63	39	0	**114**	0	49	81	84	0	**214**	2	98	56	0	0	**154**	0	**601**
12:45PM	0	79	22	0	**101**	0	13	75	30	0	**118**	0	44	88	95	0	**227**	0	99	55	0	0	**154**	0	**600**
Hourly Total	7	344	87	0	**438**	0	60	270	149	0	**479**	0	179	337	324	0	**840**	4	377	253	3	0	**633**	2	**2390**
1:00PM	1	105	17	0	**123**	0	17	71	38	0	**126**	0	44	80	88	0	**212**	0	102	76	0	0	**178**	0	**639**
1:15PM	5	68	15	0	**88**	0	14	61	47	0	**122**	2	46	82	78	0	**206**	0	82	65	0	0	**147**	2	**563**
1:30PM	6	88	16	0	**110**	0	10	71	31	0	**112**	0	33	66	73	0	**172**	0	95	59	1	0	**155**	0	**549**
1:45PM	1	62	18	0	**81**	0	13	81	32	0	**126**	0	32	97	83	0	**212**	1	84	75	1	0	**160**	0	**579**
Hourly Total	13	323	66	0	**402**	0	54	284	148	0	**486**	2	155	325	322	0	**802**	1	363	275	2	0	**640**	2	**2330**
Total	71	2785	892	0	**3748**	7	496	2879	1331	0	**4706**	3	1604	3308	2833	0	**7745**	12	2684	2133	28	0	**4845**	12	**21044**
% Approach	1.9%	74.3%	23.8%	0%	**-**	-	10.5%	61.2%	28.3%	0%	**-**	-	20.7%	42.7%	36.6%	0%	**-**	-	55.4%	44.0%	0.6%	0%	**-**	-	-
% Total	0.3%	13.2%	4.2%	0%	**17.8%**	-	2.4%	13.7%	6.3%	0%	**22.4%**	-	7.6%	15.7%	13.5%	0%	**36.8%**	-	12.8%	10.1%	0.1%	0%	**23.0%**	-	-
Motorcycles	0	5	1	0	**6**	-	1	0	1	0	**2**	-	5	4	5	0	**14**	-	8	4	0	0	**12**	-	34
% Motorcycles	0%	0.2%	0.1%	0%	**0.2%**	-	0.2%	0%	0.1%	0%	**0%**	-	0.3%	0.1%	0.2%	0%	**0.2%**	-	0.3%	0.2%	0%	0%	**0.2%**	-	0.2%
Lights	71	2708	875	0	**3654**	-	484	2805	1296	0	**4585**	-	1566	3235	2782	0	**7583**	-	2623	2077	28	0	**4728**	-	20550
% Lights	100%	97.2%	98.1%	0%	**97.5%**	-	97.6%	97.4%	97.4%	0%	**97.4%**	-	97.6%	97.8%	98.2%	0%	**97.9%**	-	97.7%	97.4%	100%	0%	**97.6%**	-	97.7%
Single-Unit Trucks	0	35	11	0	**46**	-	7	48	24	0	**79**	-	22	24	24	0	**70**	-	30	27	0	0	**57**	-	252
% Single-Unit Trucks	0%	1.3%	1.2%	0%	**1.2%**	-	1.4%	1.7%	1.8%	0%	**1.7%**	-	1.4%	0.7%	0.8%	0%	**0.9%**	-	1.1%	1.3%	0%	0%	**1.2%**	-	1.2%
Articulated Trucks	0	10	1	0	**11**	-	3	13	2	0	**18**	-	2	12	7	0	**21**	-	10	13	0	0	**23**	-	73
% Articulated Trucks	0%	0.4%	0.1%	0%	**0.3%**	-	0.6%	0.5%	0.2%	0%	**0.4%**	-	0.1%	0.4%	0.2%	0%	**0.3%**	-	0.4%	0.6%	0%	0%	**0.5%**	-	0.3%
Buses	0	27	3	0	**30**	-	1	12	8	0	**21**	-	6	32	13	0	**51**	-	13	12	0	0	**25**	-	127

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Buses	0%	1.0%	0.3%	0%	**0.8%**	-	0.2%	0.4%	0.6%	0%	**0.4%**	-	0.4%	1.0%	0.5%	0%	**0.7%**	-	0.5%	0.6%	0%	0%	**0.5%**	-	0.6%
Bicycles on Road	0	0	1	0	**1**	-	0	1	0	0	**1**	-	3	1	2	0	**6**	-	0	0	0	0	**0**	-	8
% Bicycles on Road	0%	0%	0.1%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.2%	0%	0.1%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	9	-	-	-	-	-	10	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	75.0%	-	-	-	-	-	83.3%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	25.0%	-	-	-	-	-	16.7%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (11) Washington @ Hancock TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065017, Location: 42.196203, -71.005172

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	0	82	11	0	**93**	0	7	103	36	0	**146**	1	55	112	118	0	**285**	0	67	54	2	0	**123**	0	**647**
8:00AM	1	58	15	0	**74**	1	11	89	32	0	**132**	0	41	99	93	0	**233**	0	48	48	1	0	**97**	0	**536**
8:15AM	3	70	17	0	**90**	0	15	86	17	0	**118**	0	47	123	98	0	**268**	0	48	37	0	0	**85**	0	**561**
8:30AM	1	68	25	0	**94**	0	18	112	31	0	**161**	0	52	96	105	0	**253**	0	68	44	2	0	**114**	0	**622**
Total	5	278	68	0	**351**	1	51	390	116	0	**557**	1	195	430	414	0	**1039**	0	231	183	5	0	**419**	0	**2366**
% Approach	1.4%	79.2%	19.4%	0%	**-**	-	9.2%	70.0%	20.8%	0%	**-**	-	18.8%	41.4%	39.8%	0%	**-**	-	55.1%	43.7%	1.2%	0%	**-**	-	-
% Total	0.2%	11.7%	2.9%	0%	**14.8%**	-	2.2%	16.5%	4.9%	0%	**23.5%**	-	8.2%	18.2%	17.5%	0%	**43.9%**	-	9.8%	7.7%	0.2%	0%	**17.7%**	-	-
PHF	0.417	0.848	0.698	-	**0.941**	-	0.708	0.871	0.806	-	**0.865**	-	0.886	0.874	0.877	-	**0.911**	-	0.849	0.847	0.625	-	**0.852**	-	0.914
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	5	268	66	0	**339**	-	48	375	113	0	**536**	-	191	415	407	0	**1013**	-	220	178	5	0	**403**	-	2291
% Lights	100%	96.4%	97.1%	0%	**96.6%**	-	94.1%	96.2%	97.4%	0%	**96.2%**	-	97.9%	96.5%	98.3%	0%	**97.5%**	-	95.2%	97.3%	100%	0%	**96.2%**	-	96.8%
Single-Unit Trucks	0	5	0	0	**5**	-	2	10	1	0	**13**	-	3	3	5	0	**11**	-	5	2	0	0	**7**	-	36
% Single-Unit Trucks	0%	1.8%	0%	0%	**1.4%**	-	3.9%	2.6%	0.9%	0%	**2.3%**	-	1.5%	0.7%	1.2%	0%	**1.1%**	-	2.2%	1.1%	0%	0%	**1.7%**	-	1.5%
Articulated Trucks	0	1	1	0	**2**	-	1	1	0	0	**2**	-	0	4	0	0	**4**	-	2	2	0	0	**4**	-	12
% Articulated Trucks	0%	0.4%	1.5%	0%	**0.6%**	-	2.0%	0.3%	0%	0%	**0.4%**	-	0%	0.9%	0%	0%	**0.4%**	-	0.9%	1.1%	0%	0%	**1.0%**	-	0.5%
Buses	0	4	0	0	**4**	-	0	4	2	0	**6**	-	1	8	2	0	**11**	-	4	1	0	0	**5**	-	26
% Buses	0%	1.4%	0%	0%	**1.1%**	-	0%	1.0%	1.7%	0%	**1.1%**	-	0.5%	1.9%	0.5%	0%	**1.1%**	-	1.7%	0.5%	0%	0%	**1.2%**	-	1.1%
Bicycles on Road	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	1.5%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (11) Washington @ Hancock TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065017, Location: 42.196203, -71.005172

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	3	92	50	0	**145**	0	17	92	59	0	**168**	0	40	70	60	0	**170**	0	99	76	0	0	**175**	0	**658**
4:45PM	1	134	49	0	**184**	0	12	92	43	0	**147**	0	49	90	56	0	**195**	0	78	79	0	0	**157**	0	**683**
5:00PM	1	77	32	0	**110**	0	10	78	58	0	**146**	0	47	83	74	0	**204**	3	105	76	0	0	**181**	0	**641**
5:15PM	4	95	65	0	**164**	0	15	95	54	0	**164**	0	39	86	78	0	**203**	0	75	66	0	0	**141**	0	**672**
Total	9	398	196	0	**603**	0	54	357	214	0	**625**	0	175	329	268	0	**772**	3	357	297	0	0	**654**	0	**2654**
% Approach	1.5%	66.0%	32.5%	0%	**-**	-	8.6%	57.1%	34.2%	0%	**-**	-	22.7%	42.6%	34.7%	0%	**-**	-	54.6%	45.4%	0%	0%	**-**	-	-
% Total	0.3%	15.0%	7.4%	0%	**22.7%**	-	2.0%	13.5%	8.1%	0%	**23.5%**	-	6.6%	12.4%	10.1%	0%	**29.1%**	-	13.5%	11.2%	0%	0%	**24.6%**	-	-
PHF	0.563	0.743	0.754	-	**0.819**	-	0.794	0.937	0.907	-	**0.929**	-	0.893	0.914	0.859	-	**0.946**	-	0.850	0.940	-	-	**0.903**	-	0.973
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	9	389	193	0	**591**	-	51	351	207	0	**609**	-	174	326	261	0	**761**	-	356	292	0	0	**648**	-	2609
% Lights	100%	97.7%	98.5%	0%	**98.0%**	-	94.4%	98.3%	96.7%	0%	**97.4%**	-	99.4%	99.1%	97.4%	0%	**98.6%**	-	99.7%	98.3%	0%	0%	**99.1%**	-	98.3%
Single-Unit Trucks	0	6	3	0	**9**	-	1	3	7	0	**11**	-	0	1	6	0	**7**	-	1	4	0	0	**5**	-	32
% Single-Unit Trucks	0%	1.5%	1.5%	0%	**1.5%**	-	1.9%	0.8%	3.3%	0%	**1.8%**	-	0%	0.3%	2.2%	0%	**0.9%**	-	0.3%	1.3%	0%	0%	**0.8%**	-	1.2%
Articulated Trucks	0	1	0	0	**1**	-	1	2	0	0	**3**	-	0	1	1	0	**2**	-	0	0	0	0	**0**	-	6
% Articulated Trucks	0%	0.3%	0%	0%	**0.2%**	-	1.9%	0.6%	0%	0%	**0.5%**	-	0%	0.3%	0.4%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	2	0	0	**2**	-	1	0	0	0	**1**	-	1	1	0	0	**2**	-	0	1	0	0	**1**	-	6
% Buses	0%	0.5%	0%	0%	**0.3%**	-	1.9%	0%	0%	0%	**0.2%**	-	0.6%	0.3%	0%	0%	**0.3%**	-	0%	0.3%	0%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (11) Washington @ Hancock TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 11:30AM - 12:30 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065017, Location: 42.196203, -71.005172

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 11:30AM	4	92	17	0	**113**	1	18	79	37	0	**134**	0	46	81	85	0	**212**	0	87	71	5	0	**163**	0	**622**
11:45AM	4	86	19	0	**109**	1	24	78	43	0	**145**	0	58	95	104	0	**257**	0	74	60	3	0	**137**	1	**648**
12:00PM	2	83	19	0	**104**	0	19	59	36	0	**114**	0	48	88	67	0	**203**	2	89	79	1	0	**169**	0	**590**
12:15PM	4	89	21	0	**114**	0	16	73	44	0	**133**	0	38	80	78	0	**196**	0	91	63	2	0	**156**	2	**599**
Total	14	350	76	0	**440**	2	77	289	160	0	**526**	0	190	344	334	0	**868**	2	341	273	11	0	**625**	3	**2459**
% Approach	3.2%	79.5%	17.3%	0%	**-**	-	14.6%	54.9%	30.4%	0%	**-**	-	21.9%	39.6%	38.5%	0%	**-**	-	54.6%	43.7%	1.8%	0%	**-**	-	-
% Total	0.6%	14.2%	3.1%	0%	**17.9%**	-	3.1%	11.8%	6.5%	0%	**21.4%**	-	7.7%	14.0%	13.6%	0%	**35.3%**	-	13.9%	11.1%	0.4%	0%	**25.4%**	-	-
PHF	0.875	0.951	0.905	-	**0.965**	-	0.802	0.915	0.909	-	**0.907**	-	0.819	0.905	0.803	-	**0.844**	-	0.937	0.864	0.550	-	**0.925**	-	0.949
Motorcycles	0	2	0	0	**2**	-	1	0	0	0	**1**	-	2	0	2	0	**4**	-	4	1	0	0	**5**	-	12
% Motorcycles	0%	0.6%	0%	0%	**0.5%**	-	1.3%	0%	0%	0%	**0.2%**	-	1.1%	0%	0.6%	0%	**0.5%**	-	1.2%	0.4%	0%	0%	**0.8%**	-	0.5%
Lights	14	343	75	0	**432**	-	75	288	159	0	**522**	-	186	342	330	0	**858**	-	332	269	11	0	**612**	-	2424
% Lights	100%	98.0%	98.7%	0%	**98.2%**	-	97.4%	99.7%	99.4%	0%	**99.2%**	-	97.9%	99.4%	98.8%	0%	**98.8%**	-	97.4%	98.5%	100%	0%	**97.9%**	-	98.6%
Single-Unit Trucks	0	3	1	0	**4**	-	1	0	1	0	**2**	-	2	0	2	0	**4**	-	4	0	0	0	**4**	-	14
% Single-Unit Trucks	0%	0.9%	1.3%	0%	**0.9%**	-	1.3%	0%	0.6%	0%	**0.4%**	-	1.1%	0%	0.6%	0%	**0.5%**	-	1.2%	0%	0%	0%	**0.6%**	-	0.6%
Articulated Trucks	0	1	0	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1	1	0	0	**2**	-	4
% Articulated Trucks	0%	0.3%	0%	0%	**0.2%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.3%	0.4%	0%	0%	**0.3%**	-	0.2%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	2	0	0	**2**	-	5
% Buses	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.2%**	-	0%	0.7%	0%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (11) Washington @ Hancock TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065017, Location: 42.196203, -71.005172

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Hancock Street						Plain Street						Hancock Street (Route 37)						Washington Street (Route 37)						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	1	105	17	0	**123**	0	17	71	38	0	**126**	0	44	80	88	0	**212**	0	102	76	0	0	**178**	0	**639**
1:15PM	5	68	15	0	**88**	0	14	61	47	0	**122**	2	46	82	78	0	**206**	0	82	65	0	0	**147**	2	**563**
1:30PM	6	88	16	0	**110**	0	10	71	31	0	**112**	0	33	66	73	0	**172**	0	95	59	1	0	**155**	0	**549**
1:45PM	1	62	18	0	**81**	0	13	81	32	0	**126**	0	32	97	83	0	**212**	1	84	75	1	0	**160**	0	**579**
Total	13	323	66	0	**402**	0	54	284	148	0	**486**	2	155	325	322	0	**802**	1	363	275	2	0	**640**	2	**2330**
% Approach	3.2%	80.3%	16.4%	0%	**-**	-	11.1%	58.4%	30.5%	0%	**-**	-	19.3%	40.5%	40.1%	0%	**-**	-	56.7%	43.0%	0.3%	0%	**-**	-	-
% Total	0.6%	13.9%	2.8%	0%	**17.3%**	-	2.3%	12.2%	6.4%	0%	**20.9%**	-	6.7%	13.9%	13.8%	0%	**34.4%**	-	15.6%	11.8%	0.1%	0%	**27.5%**	-	-
PHF	0.542	0.769	0.917	-	**0.817**	-	0.794	0.877	0.787	-	**0.964**	-	0.842	0.838	0.930	-	**0.943**	-	0.890	0.905	0.500	-	**0.899**	-	0.914
Motorcycles	0	2	1	0	**3**	-	0	0	0	0	**0**	-	3	3	3	0	**9**	-	0	2	0	0	**2**	-	14
% Motorcycles	0%	0.6%	1.5%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	1.9%	0.9%	0.9%	0%	**1.1%**	-	0%	0.7%	0%	0%	**0.3%**	-	0.6%
Lights	13	315	63	0	**391**	-	54	279	146	0	**479**	-	150	317	315	0	**782**	-	358	269	2	0	**629**	-	2281
% Lights	100%	97.5%	95.5%	0%	**97.3%**	-	100%	98.2%	98.6%	0%	**98.6%**	-	96.8%	97.5%	97.8%	0%	**97.5%**	-	98.6%	97.8%	100%	0%	**98.3%**	-	97.9%
Single-Unit Trucks	0	4	2	0	**6**	-	0	4	1	0	**5**	-	1	3	1	0	**5**	-	5	3	0	0	**8**	-	24
% Single-Unit Trucks	0%	1.2%	3.0%	0%	**1.5%**	-	0%	1.4%	0.7%	0%	**1.0%**	-	0.6%	0.9%	0.3%	0%	**0.6%**	-	1.4%	1.1%	0%	0%	**1.3%**	-	1.0%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	0	1	0	0	**1**	-	3
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0.3%	0%	**0.2%**	-	0%	0.4%	0%	0%	**0.2%**	-	0.1%
Buses	0	2	0	0	**2**	-	0	1	1	0	**2**	-	1	1	0	0	**2**	-	0	0	0	0	**0**	-	6
% Buses	0%	0.6%	0%	0%	**0.5%**	-	0%	0.4%	0.7%	0%	**0.4%**	-	0.6%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	2	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.6%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (12) Washington @ Braxton TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065020, Location: 42.188421, -71.007562

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Washington Street (Route 37)					Braxton Street					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-04 6:00AM	1	34	0	**35**	0	172	1	0	**173**	0	1	2	0	**3**	0	**211**
6:15AM	8	62	0	**70**	0	209	0	0	**209**	0	0	0	0	**0**	0	**279**
6:30AM	18	74	0	**92**	0	223	12	0	**235**	0	0	4	0	**4**	0	**331**
6:45AM	22	87	0	**109**	0	279	10	0	**289**	0	2	2	0	**4**	0	**402**
Hourly Total	49	257	0	**306**	0	883	23	0	**906**	0	3	8	0	**11**	0	**1223**
7:00AM	3	94	0	**97**	0	298	5	0	**303**	0	2	1	0	**3**	0	**403**
7:15AM	6	111	0	**117**	0	243	3	0	**246**	0	0	5	0	**5**	0	**368**
7:30AM	6	125	0	**131**	0	252	7	0	**259**	0	2	10	0	**12**	0	**402**
7:45AM	10	174	0	**184**	0	263	8	0	**271**	0	1	8	0	**9**	0	**464**
Hourly Total	25	504	0	**529**	0	1056	23	0	**1079**	0	5	24	0	**29**	0	**1637**
8:00AM	6	143	0	**149**	0	267	11	0	**278**	0	2	4	0	**6**	1	**433**
8:15AM	14	116	0	**130**	0	253	11	0	**264**	0	5	3	0	**8**	0	**402**
8:30AM	24	170	0	**194**	0	233	10	0	**243**	0	1	6	0	**7**	0	**444**
8:45AM	24	115	0	**139**	0	224	12	0	**236**	0	5	4	0	**9**	0	**384**
Hourly Total	68	544	0	**612**	0	977	44	0	**1021**	0	13	17	0	**30**	1	**1663**
3:00PM	12	189	0	**201**	0	175	4	0	**179**	0	12	50	0	**62**	0	**442**
3:15PM	7	217	0	**224**	0	161	8	0	**169**	2	6	14	0	**20**	1	**413**
3:30PM	12	228	0	**240**	0	167	5	0	**172**	0	7	8	0	**15**	0	**427**
3:45PM	8	241	0	**249**	0	169	1	0	**170**	1	10	17	0	**27**	0	**446**
Hourly Total	39	875	0	**914**	0	672	18	0	**690**	3	35	89	0	**124**	1	**1728**
4:00PM	5	252	0	**257**	0	156	3	0	**159**	1	7	15	0	**22**	0	**438**
4:15PM	13	236	0	**249**	0	176	4	0	**180**	0	7	11	0	**18**	0	**447**
4:30PM	16	240	0	**256**	0	157	4	0	**161**	0	9	15	0	**24**	0	**441**
4:45PM	16	239	0	**255**	0	178	7	0	**185**	0	8	22	0	**30**	0	**470**
Hourly Total	50	967	0	**1017**	0	667	18	0	**685**	1	31	63	0	**94**	0	**1796**
5:00PM	10	221	0	**231**	0	187	5	0	**192**	1	13	26	0	**39**	1	**462**
5:15PM	7	220	0	**227**	0	194	8	0	**202**	0	6	17	0	**23**	0	**452**
5:30PM	30	210	0	**240**	0	165	17	0	**182**	0	13	14	0	**27**	0	**449**
5:45PM	18	218	0	**236**	0	171	15	0	**186**	0	11	13	0	**24**	0	**446**
Hourly Total	65	869	0	**934**	0	717	45	0	**762**	1	43	70	0	**113**	1	**1809**
2023-05-06 11:00AM	12	158	0	**170**	0	171	8	0	**179**	0	7	39	0	**46**	0	**395**
11:15AM	30	179	0	**209**	0	177	7	0	**184**	1	3	18	0	**21**	2	**414**
11:30AM	29	176	0	**205**	0	202	4	0	**206**	0	12	19	0	**31**	1	**442**
11:45AM	14	192	1	**207**	0	202	6	0	**208**	0	14	61	0	**75**	1	**490**
Hourly Total	85	705	1	**791**	0	752	25	0	**777**	1	36	137	0	**173**	4	**1741**
12:00PM	18	187	0	**205**	0	168	1	0	**169**	0	3	15	0	**18**	0	**392**
12:15PM	21	209	0	**230**	0	199	10	0	**209**	0	5	11	0	**16**	2	**455**
12:30PM	15	213	0	**228**	0	227	5	0	**232**	0	2	6	0	**8**	0	**468**
12:45PM	11	208	0	**219**	0	199	4	0	**203**	0	3	20	0	**23**	0	**445**
Hourly Total	65	817	0	**882**	0	793	20	0	**813**	0	13	52	0	**65**	2	**1760**
1:00PM	13	229	0	**242**	0	193	2	0	**195**	0	10	16	0	**26**	0	**463**
1:15PM	13	189	0	**202**	0	179	4	0	**183**	0	1	25	0	**26**	0	**411**
1:30PM	12	208	0	**220**	0	159	9	0	**168**	0	2	11	0	**13**	0	**401**
1:45PM	9	163	0	**172**	0	191	5	0	**196**	0	8	33	0	**41**	0	**409**
Hourly Total	47	789	0	**836**	0	722	20	0	**742**	0	21	85	0	**106**	0	**1684**
Total	493	6327	1	**6821**	0	7239	236	0	**7475**	6	200	545	0	**745**	9	**15041**
% Approach	7.2%	92.8%	0%	**-**	-	96.8%	3.2%	0%	**-**	-	26.8%	73.2%	0%	**-**	-	-
% Total	3.3%	42.1%	0%	**45.3%**	-	48.1%	1.6%	0%	**49.7%**	-	1.3%	3.6%	0%	**5.0%**	-	-
Motorcycles	0	11	0	**11**	-	14	0	0	**14**	-	0	0	0	**0**	-	25
% Motorcycles	0%	0.2%	0%	**0.2%**	-	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.2%
Lights	489	6163	1	**6653**	-	7093	234	0	**7327**	-	199	536	0	**735**	-	14715
% Lights	99.2%	97.4%	100%	**97.5%**	-	98.0%	99.2%	0%	**98.0%**	-	99.5%	98.3%	0%	**98.7%**	-	97.8%

Leg Direction	Washington Street (Route 37) Southbound					Washington Street (Route 37) Northbound					Braxton Street Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
Single-Unit Trucks	3	97	0	**100**	-	57	1	0	**58**	-	1	5	0	**6**	-	164
% Single-Unit Trucks	0.6%	1.5%	0%	**1.5%**	-	0.8%	0.4%	0%	**0.8%**	-	0.5%	0.9%	0%	**0.8%**	-	1.1%
Articulated Trucks	0	13	0	**13**	-	17	1	0	**18**	-	0	1	0	**1**	-	32
% Articulated Trucks	0%	0.2%	0%	**0.2%**	-	0.2%	0.4%	0%	**0.2%**	-	0%	0.2%	0%	**0.1%**	-	0.2%
Buses	1	43	0	**44**	-	52	0	0	**52**	-	0	3	0	**3**	-	99
% Buses	0.2%	0.7%	0%	**0.6%**	-	0.7%	0%	0%	**0.7%**	-	0%	0.6%	0%	**0.4%**	-	0.7%
Bicycles on Road	0	0	0	**0**	-	6	0	0	**6**	-	0	0	0	**0**	-	6
% Bicycles on Road	0%	0%	0%	**0%**	-	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	4	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	77.8%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	2	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	22.2%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (12) Washington @ Braxton TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065020, Location: 42.188421, -71.007562

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Washington Street (Route 37)					Braxton Street					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	10	174	0	**184**	0	263	8	0	**271**	0	1	8	0	**9**	0	**464**
8:00AM	6	143	0	**149**	0	267	11	0	**278**	0	2	4	0	**6**	1	**433**
8:15AM	14	116	0	**130**	0	253	11	0	**264**	0	5	3	0	**8**	0	**402**
8:30AM	24	170	0	**194**	0	233	10	0	**243**	0	1	6	0	**7**	0	**444**
Total	54	603	0	**657**	0	1016	40	0	**1056**	0	9	21	0	**30**	1	**1743**
% Approach	8.2%	91.8%	0%	**-**	-	96.2%	3.8%	0%	**-**	-	30.0%	70.0%	0%	**-**	-	-
% Total	3.1%	34.6%	0%	**37.7%**	-	58.3%	2.3%	0%	**60.6%**	-	0.5%	1.2%	0%	**1.7%**	-	-
PHF	0.563	0.866	-	**0.847**	-	0.951	0.909	-	**0.950**	-	0.450	0.656	-	**0.833**	-	0.939
Motorcycles	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	54	576	0	**630**	-	992	40	0	**1032**	-	9	20	0	**29**	-	1691
% Lights	100%	95.5%	0%	**95.9%**	-	97.6%	100%	0%	**97.7%**	-	100%	95.2%	0%	**96.7%**	-	97.0%
Single-Unit Trucks	0	15	0	**15**	-	6	0	0	**6**	-	0	1	0	**1**	-	22
% Single-Unit Trucks	0%	2.5%	0%	**2.3%**	-	0.6%	0%	0%	**0.6%**	-	0%	4.8%	0%	**3.3%**	-	1.3%
Articulated Trucks	0	2	0	**2**	-	3	0	0	**3**	-	0	0	0	**0**	-	5
% Articulated Trucks	0%	0.3%	0%	**0.3%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.3%
Buses	0	10	0	**10**	-	15	0	0	**15**	-	0	0	0	**0**	-	25
% Buses	0%	1.7%	0%	**1.5%**	-	1.5%	0%	0%	**1.4%**	-	0%	0%	0%	**0%**	-	1.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (12) Washington @ Braxton TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065020, Location: 42.188421, -71.007562

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Washington Street (Route 37) Southbound					Washington Street (Route 37) Northbound					Braxton Street Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-04 4:45PM	16	239	0	**255**	0	178	7	0	**185**	0	8	22	0	**30**	0	**470**
5:00PM	10	221	0	**231**	0	187	5	0	**192**	1	13	26	0	**39**	1	**462**
5:15PM	7	220	0	**227**	0	194	8	0	**202**	0	6	17	0	**23**	0	**452**
5:30PM	30	210	0	**240**	0	165	17	0	**182**	0	13	14	0	**27**	0	**449**
Total	63	890	0	**953**	0	724	37	0	**761**	1	40	79	0	**119**	1	**1833**
% Approach	6.6%	93.4%	0%	**-**	-	95.1%	4.9%	0%	**-**	-	33.6%	66.4%	0%	**-**	-	-
% Total	3.4%	48.6%	0%	**52.0%**	-	39.5%	2.0%	0%	**41.5%**	-	2.2%	4.3%	0%	**6.5%**	-	-
PHF	0.525	0.931	-	**0.934**	-	0.933	0.544	-	**0.942**	-	0.769	0.760	-	**0.763**	-	0.975
Motorcycles	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	63	873	0	**936**	-	712	37	0	**749**	-	40	78	0	**118**	-	1803
% Lights	100%	98.1%	0%	**98.2%**	-	98.3%	100%	0%	**98.4%**	-	100%	98.7%	0%	**99.2%**	-	98.4%
Single-Unit Trucks	0	14	0	**14**	-	8	0	0	**8**	-	0	1	0	**1**	-	23
% Single-Unit Trucks	0%	1.6%	0%	**1.5%**	-	1.1%	0%	0%	**1.1%**	-	0%	1.3%	0%	**0.8%**	-	1.3%
Articulated Trucks	0	1	0	**1**	-	2	0	0	**2**	-	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.1%	0%	**0.1%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.2%
Buses	0	2	0	**2**	-	2	0	0	**2**	-	0	0	0	**0**	-	4
% Buses	0%	0.2%	0%	**0.2%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	0%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (12) Washington @ Braxton TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065020, Location: 42.188421, -71.007562

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Washington Street (Route 37) Southbound					Washington Street (Route 37) Northbound					Braxton Street Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	21	209	0	**230**	0	199	10	0	**209**	0	5	11	0	**16**	2	**455**
12:30PM	15	213	0	**228**	0	227	5	0	**232**	0	2	6	0	**8**	0	**468**
12:45PM	11	208	0	**219**	0	199	4	0	**203**	0	3	20	0	**23**	0	**445**
1:00PM	13	229	0	**242**	0	193	2	0	**195**	0	10	16	0	**26**	0	**463**
Total	60	859	0	**919**	0	818	21	0	**839**	0	20	53	0	**73**	2	**1831**
% Approach	6.5%	93.5%	0%	**-**	-	97.5%	2.5%	0%	**-**	-	27.4%	72.6%	0%	**-**	-	**-**
% Total	3.3%	46.9%	0%	**50.2%**	-	44.7%	1.1%	0%	**45.8%**	-	1.1%	2.9%	0%	**4.0%**	-	**-**
PHF	0.714	0.938	-	**0.949**	-	0.902	0.525	-	**0.905**	-	0.500	0.663	-	**0.702**	-	0.979
Motorcycles	0	6	0	**6**	-	5	0	0	**5**	-	0	0	0	**0**	-	11
% Motorcycles	0%	0.7%	0%	**0.7%**	-	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	**0%**	-	0.6%
Lights	60	839	0	**899**	-	807	20	0	**827**	-	20	53	0	**73**	-	1799
% Lights	100%	97.7%	0%	**97.8%**	-	98.7%	95.2%	0%	**98.6%**	-	100%	100%	0%	**100%**	-	98.3%
Single-Unit Trucks	0	12	0	**12**	-	1	1	0	**2**	-	0	0	0	**0**	-	14
% Single-Unit Trucks	0%	1.4%	0%	**1.3%**	-	0.1%	4.8%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Buses	0	2	0	**2**	-	2	0	0	**2**	-	0	0	0	**0**	-	4
% Buses	0%	0.2%	0%	**0.2%**	-	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	3	0	0	**3**	-	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	0%	**0%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (12) Washington @ Braxton TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065020, Location: 42.188421, -71.007562

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Washington Street (Route 37)					Braxton Street					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	13	229	0	**242**	0	193	2	0	**195**	0	10	16	0	**26**	0	**463**
1:15PM	13	189	0	**202**	0	179	4	0	**183**	0	1	25	0	**26**	0	**411**
1:30PM	12	208	0	**220**	0	159	9	0	**168**	0	2	11	0	**13**	0	**401**
1:45PM	9	163	0	**172**	0	191	5	0	**196**	0	8	33	0	**41**	0	**409**
Total	47	789	0	**836**	0	722	20	0	**742**	0	21	85	0	**106**	0	**1684**
% Approach	5.6%	94.4%	0%	**-**	-	97.3%	2.7%	0%	**-**	-	19.8%	80.2%	0%	**-**	-	-
% Total	2.8%	46.9%	0%	**49.6%**	-	42.9%	1.2%	0%	**44.1%**	-	1.2%	5.0%	0%	**6.3%**	-	-
PHF	0.904	0.861	-	**0.864**	-	0.942	0.556	-	**0.944**	-	0.525	0.644	-	**0.646**	-	0.912
Motorcycles	0	0	0	**0**	-	9	0	0	**9**	-	0	0	0	**0**	-	9
% Motorcycles	0%	0%	0%	**0%**	-	1.2%	0%	0%	**1.2%**	-	0%	0%	0%	**0%**	-	0.5%
Lights	46	778	0	**824**	-	704	20	0	**724**	-	21	84	0	**105**	-	1653
% Lights	97.9%	98.6%	0%	**98.6%**	-	97.5%	100%	0%	**97.6%**	-	100%	98.8%	0%	**99.1%**	-	98.2%
Single-Unit Trucks	1	8	0	**9**	-	5	0	0	**5**	-	0	0	0	**0**	-	14
% Single-Unit Trucks	2.1%	1.0%	0%	**1.1%**	-	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	**0%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	1	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	1.2%	0%	**0.9%**	-	0.1%
Buses	0	3	0	**3**	-	2	0	0	**2**	-	0	0	0	**0**	-	5
% Buses	0%	0.4%	0%	**0.4%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	**0**	-	2	0	0	**2**	-	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	**0%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (13) Washington @ Peach TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065029, Location: 42.185921, -71.008598

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2023-05-04 6:00AM	25	10	0	**35**	0	9	10	0	**19**	0	19	173	0	**192**	0	**246**
6:15AM	54	6	0	**60**	0	4	12	0	**16**	0	18	199	0	**217**	0	**293**
6:30AM	64	14	0	**78**	0	22	13	0	**35**	0	12	218	0	**230**	1	**343**
6:45AM	74	11	0	**85**	0	28	20	0	**48**	0	17	268	0	**285**	0	**418**
Hourly Total	217	41	0	**258**	0	63	55	0	**118**	0	66	858	0	**924**	1	**1300**
7:00AM	87	0	0	**87**	0	51	14	0	**65**	0	21	228	0	**249**	0	**401**
7:15AM	94	4	0	**98**	0	39	8	0	**47**	0	16	203	0	**219**	0	**364**
7:30AM	105	13	0	**118**	0	37	25	0	**62**	0	45	214	0	**259**	0	**439**
7:45AM	136	30	0	**166**	0	60	16	0	**76**	0	40	209	0	**249**	0	**491**
Hourly Total	422	47	0	**469**	0	187	63	0	**250**	0	122	854	0	**976**	0	**1695**
8:00AM	134	10	0	**144**	0	37	23	0	**60**	1	34	246	0	**280**	0	**484**
8:15AM	103	14	0	**117**	0	25	16	0	**41**	0	28	229	0	**257**	0	**415**
8:30AM	150	25	0	**175**	0	28	20	0	**48**	0	48	221	0	**269**	0	**492**
8:45AM	100	16	0	**116**	0	32	13	0	**45**	0	24	197	0	**221**	0	**382**
Hourly Total	487	65	0	**552**	0	122	72	0	**194**	1	134	893	0	**1027**	0	**1773**
3:00PM	180	29	0	**209**	0	35	34	0	**69**	0	29	147	0	**176**	0	**454**
3:15PM	196	24	0	**220**	0	21	24	0	**45**	0	25	148	0	**173**	0	**438**
3:30PM	223	20	0	**243**	0	23	33	0	**56**	0	25	152	0	**177**	0	**476**
3:45PM	228	25	0	**253**	0	20	23	0	**43**	0	32	153	0	**185**	0	**481**
Hourly Total	827	98	0	**925**	0	99	114	0	**213**	0	111	600	0	**711**	0	**1849**
4:00PM	234	24	0	**258**	0	23	29	0	**52**	0	26	131	0	**157**	1	**467**
4:15PM	214	27	0	**241**	0	18	22	0	**40**	0	40	156	0	**196**	0	**477**
4:30PM	233	21	0	**254**	0	13	28	0	**41**	0	31	148	0	**179**	0	**474**
4:45PM	223	20	0	**243**	0	25	22	0	**47**	0	36	161	0	**197**	1	**487**
Hourly Total	904	92	0	**996**	0	79	101	0	**180**	0	133	596	0	**729**	2	**1905**
5:00PM	211	25	0	**236**	0	26	29	0	**55**	0	41	179	0	**220**	0	**511**
5:15PM	191	24	0	**215**	0	30	39	0	**69**	0	33	171	0	**204**	0	**488**
5:30PM	195	22	0	**217**	0	19	25	0	**44**	0	25	152	0	**177**	0	**438**
5:45PM	198	25	0	**223**	0	14	22	0	**36**	0	39	175	0	**214**	0	**473**
Hourly Total	795	96	0	**891**	0	89	115	0	**204**	0	138	677	0	**815**	0	**1910**
2023-05-06 11:00AM	141	19	0	**160**	0	21	21	0	**42**	0	17	151	0	**168**	0	**370**
11:15AM	172	20	0	**192**	0	13	20	0	**33**	2	12	175	0	**187**	0	**412**
11:30AM	162	25	0	**187**	0	17	17	0	**34**	0	13	187	0	**200**	0	**421**
11:45AM	181	24	0	**205**	0	30	13	0	**43**	0	17	174	0	**191**	0	**439**
Hourly Total	656	88	0	**744**	0	81	71	0	**152**	2	59	687	0	**746**	0	**1642**
12:00PM	161	8	0	**169**	0	9	16	0	**25**	0	36	189	0	**225**	0	**419**
12:15PM	193	4	0	**197**	0	25	19	0	**44**	0	22	185	0	**207**	0	**448**
12:30PM	187	19	0	**206**	0	13	18	0	**31**	0	23	186	0	**209**	0	**446**
12:45PM	187	11	0	**198**	0	17	18	0	**35**	0	21	183	0	**204**	0	**437**
Hourly Total	728	42	0	**770**	0	64	71	0	**135**	0	102	743	0	**845**	0	**1750**
1:00PM	198	39	0	**237**	0	18	23	0	**41**	1	20	171	0	**191**	0	**469**
1:15PM	177	22	0	**199**	0	19	15	0	**34**	1	23	164	0	**187**	0	**420**
1:30PM	181	21	0	**202**	0	27	27	0	**54**	1	28	133	0	**161**	0	**417**
1:45PM	153	19	0	**172**	0	16	19	1	**36**	0	17	182	0	**199**	0	**407**
Hourly Total	709	101	0	**810**	0	80	84	1	**165**	3	88	650	0	**738**	0	**1713**
Total	5745	670	0	**6415**	0	864	746	1	**1611**	6	953	6558	0	**7511**	3	**15537**
% Approach	89.6%	10.4%	0%	**-**	-	53.6%	46.3%	0.1%	**-**	-	12.7%	87.3%	0%	**-**	-	-
% Total	37.0%	4.3%	0%	**41.3%**	-	5.6%	4.8%	0%	**10.4%**	-	6.1%	42.2%	0%	**48.3%**	-	-
Motorcycles	14	1	0	**15**	-	2	1	0	**3**	-	1	12	0	**13**	-	31
% Motorcycles	0.2%	0.1%	0%	**0.2%**	-	0.2%	0.1%	0%	**0.2%**	-	0.1%	0.2%	0%	**0.2%**	-	0.2%
Lights	5591	657	0	**6248**	-	840	725	1	**1566**	-	928	6424	0	**7352**	-	15166
% Lights	97.3%	98.1%	0%	**97.4%**	-	97.2%	97.2%	100%	**97.2%**	-	97.4%	98.0%	0%	**97.9%**	-	97.6%

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
Single-Unit Trucks	91	2	0	**93**	-	4	15	0	**19**	-	13	64	0	**77**	-	189
% Single-Unit Trucks	1.6%	0.3%	0%	**1.4%**	-	0.5%	2.0%	0%	**1.2%**	-	1.4%	1.0%	0%	**1.0%**	-	1.2%
Articulated Trucks	18	1	0	**19**	-	0	2	0	**2**	-	4	20	0	**24**	-	45
% Articulated Trucks	0.3%	0.1%	0%	**0.3%**	-	0%	0.3%	0%	**0.1%**	-	0.4%	0.3%	0%	**0.3%**	-	0.3%
Buses	30	9	0	**39**	-	18	3	0	**21**	-	6	36	0	**42**	-	102
% Buses	0.5%	1.3%	0%	**0.6%**	-	2.1%	0.4%	0%	**1.3%**	-	0.6%	0.5%	0%	**0.6%**	-	0.7%
Bicycles on Road	1	0	0	**1**	-	0	0	0	**0**	-	1	2	0	**3**	-	4
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.1%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	3	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (13) Washington @ Peach TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065029, Location: 42.185921, -71.008598

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	136	30	0	**166**	0	60	16	0	**76**	0	40	209	0	**249**	0	**491**
8:00AM	134	10	0	**144**	0	37	23	0	**60**	1	34	246	0	**280**	0	**484**
8:15AM	103	14	0	**117**	0	25	16	0	**41**	0	28	229	0	**257**	0	**415**
8:30AM	150	25	0	**175**	0	28	20	0	**48**	0	48	221	0	**269**	0	**492**
Total	523	79	0	**602**	0	150	75	0	**225**	1	150	905	0	**1055**	0	**1882**
% Approach	86.9%	13.1%	0%	**-**	-	66.7%	33.3%	0%	**-**	-	14.2%	85.8%	0%	**-**	-	-
% Total	27.8%	4.2%	0%	**32.0%**	-	8.0%	4.0%	0%	**12.0%**	-	8.0%	48.1%	0%	**56.1%**	-	-
PHF	0.870	0.658	-	**0.859**	-	0.625	0.815	-	**0.740**	-	0.781	0.920	-	**0.942**	-	0.956
Motorcycles	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	499	76	0	**575**	-	144	74	0	**218**	-	141	884	0	**1025**	-	1818
% Lights	95.4%	96.2%	0%	**95.5%**	-	96.0%	98.7%	0%	**96.9%**	-	94.0%	97.7%	0%	**97.2%**	-	96.6%
Single-Unit Trucks	13	0	0	**13**	-	0	0	0	**0**	-	5	10	0	**15**	-	28
% Single-Unit Trucks	2.5%	0%	0%	**2.2%**	-	0%	0%	0%	**0%**	-	3.3%	1.1%	0%	**1.4%**	-	1.5%
Articulated Trucks	3	0	0	**3**	-	0	1	0	**1**	-	1	4	0	**5**	-	9
% Articulated Trucks	0.6%	0%	0%	**0.5%**	-	0%	1.3%	0%	**0.4%**	-	0.7%	0.4%	0%	**0.5%**	-	0.5%
Buses	7	3	0	**10**	-	6	0	0	**6**	-	3	7	0	**10**	-	26
% Buses	1.3%	3.8%	0%	**1.7%**	-	4.0%	0%	0%	**2.7%**	-	2.0%	0.8%	0%	**0.9%**	-	1.4%
Bicycles on Road	1	0	0	**1**	-	0	0	0	**0**	-	0	0	0	**0**	-	1
% Bicycles on Road	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (13) Washington @ Peach TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065029, Location: 42.185921, -71.008598

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	233	21	0	**254**	0	13	28	0	**41**	0	31	148	0	**179**	0	**474**
4:45PM	223	20	0	**243**	0	25	22	0	**47**	0	36	161	0	**197**	1	**487**
5:00PM	211	25	0	**236**	0	26	29	0	**55**	0	41	179	0	**220**	0	**511**
5:15PM	191	24	0	**215**	0	30	39	0	**69**	0	33	171	0	**204**	0	**488**
Total	858	90	0	**948**	0	94	118	0	**212**	0	141	659	0	**800**	1	**1960**
% Approach	90.5%	9.5%	0%	**-**	-	44.3%	55.7%	0%	**-**	-	17.6%	82.4%	0%	**-**	-	-
% Total	43.8%	4.6%	0%	**48.4%**	-	4.8%	6.0%	0%	**10.8%**	-	7.2%	33.6%	0%	**40.8%**	-	-
PHF	0.921	0.900	-	**0.933**	-	0.783	0.756	-	**0.768**	-	0.860	0.920	-	**0.909**	-	0.959
Motorcycles	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Lights	839	90	0	**929**	-	93	116	0	**209**	-	140	651	0	**791**	-	1929
% Lights	97.8%	100%	0%	**98.0%**	-	98.9%	98.3%	0%	**98.6%**	-	99.3%	98.8%	0%	**98.9%**	-	98.4%
Single-Unit Trucks	16	0	0	**16**	-	1	2	0	**3**	-	1	5	0	**6**	-	25
% Single-Unit Trucks	1.9%	0%	0%	**1.7%**	-	1.1%	1.7%	0%	**1.4%**	-	0.7%	0.8%	0%	**0.8%**	-	1.3%
Articulated Trucks	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.3%	0%	**0.3%**	-	0.2%
Buses	2	0	0	**2**	-	0	0	0	**0**	-	0	1	0	**1**	-	3
% Buses	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.1%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (13) Washington @ Peach TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065029, Location: 42.185921, -71.008598

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	193	4	0	**197**	0	25	19	0	**44**	0	22	185	0	**207**	0	**448**
12:30PM	187	19	0	**206**	0	13	18	0	**31**	0	23	186	0	**209**	0	**446**
12:45PM	187	11	0	**198**	0	17	18	0	**35**	0	21	183	0	**204**	0	**437**
1:00PM	198	39	0	**237**	0	18	23	0	**41**	1	20	171	0	**191**	0	**469**
Total	765	73	0	**838**	0	73	78	0	**151**	1	86	725	0	**811**	0	**1800**
% Approach	91.3%	8.7%	0%	**-**	-	48.3%	51.7%	0%	**-**	-	10.6%	89.4%	0%	**-**	-	**-**
% Total	42.5%	4.1%	0%	**46.6%**	-	4.1%	4.3%	0%	**8.4%**	-	4.8%	40.3%	0%	**45.1%**	-	**-**
PHF	0.966	0.468	-	**0.884**	-	0.730	0.848	-	**0.858**	-	0.924	0.973	-	**0.968**	-	0.963
Motorcycles	6	0	0	**6**	-	0	1	0	**1**	-	0	5	0	**5**	-	12
% Motorcycles	0.8%	0%	0%	**0.7%**	-	0%	1.3%	0%	**0.7%**	-	0%	0.7%	0%	**0.6%**	-	0.7%
Lights	749	72	0	**821**	-	72	74	0	**146**	-	83	716	0	**799**	-	1766
% Lights	97.9%	98.6%	0%	**98.0%**	-	98.6%	94.9%	0%	**96.7%**	-	96.5%	98.8%	0%	**98.5%**	-	98.1%
Single-Unit Trucks	9	0	0	**9**	-	0	2	0	**2**	-	2	2	0	**4**	-	15
% Single-Unit Trucks	1.2%	0%	0%	**1.1%**	-	0%	2.6%	0%	**1.3%**	-	2.3%	0.3%	0%	**0.5%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	1.3%	0%	**0.7%**	-	0%	0%	0%	**0%**	-	0.1%
Buses	1	1	0	**2**	-	1	0	0	**1**	-	0	1	0	**1**	-	4
% Buses	0.1%	1.4%	0%	**0.2%**	-	1.4%	0%	0%	**0.7%**	-	0%	0.1%	0%	**0.1%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	1	1	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	1.2%	0.1%	0%	**0.2%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (13) Washington @ Peach TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065029, Location: 42.185921, -71.008598

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)					Peach Street					Washington Street (Route 37)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	198	39	0	**237**	0	18	23	0	**41**	1	20	171	0	**191**	0	**469**
1:15PM	177	22	0	**199**	0	19	15	0	**34**	1	23	164	0	**187**	0	**420**
1:30PM	181	21	0	**202**	0	27	27	0	**54**	1	28	133	0	**161**	0	**417**
1:45PM	153	19	0	**172**	0	16	19	1	**36**	0	17	182	0	**199**	0	**407**
Total	709	101	0	**810**	0	80	84	1	**165**	3	88	650	0	**738**	0	**1713**
% Approach	87.5%	12.5%	0%	**-**	-	48.5%	50.9%	0.6%	**-**	-	11.9%	88.1%	0%	**-**	-	**-**
% Total	41.4%	5.9%	0%	**47.3%**	-	4.7%	4.9%	0.1%	**9.6%**	-	5.1%	37.9%	0%	**43.1%**	-	**-**
PHF	0.895	0.647	-	**0.854**	-	0.741	0.778	0.250	**0.764**	-	0.777	0.891	-	**0.925**	-	0.916
Motorcycles	3	0	0	**3**	-	1	0	0	**1**	-	1	8	0	**9**	-	13
% Motorcycles	0.4%	0%	0%	**0.4%**	-	1.3%	0%	0%	**0.6%**	-	1.1%	1.2%	0%	**1.2%**	-	0.8%
Lights	696	99	0	**795**	-	78	82	1	**161**	-	86	632	0	**718**	-	1674
% Lights	98.2%	98.0%	0%	**98.1%**	-	97.5%	97.6%	100%	**97.6%**	-	97.7%	97.2%	0%	**97.3%**	-	97.7%
Single-Unit Trucks	9	0	0	**9**	-	0	2	0	**2**	-	0	6	0	**6**	-	17
% Single-Unit Trucks	1.3%	0%	0%	**1.1%**	-	0%	2.4%	0%	**1.2%**	-	0%	0.9%	0%	**0.8%**	-	1.0%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	2	0	**2**	-	2
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.3%	0%	**0.3%**	-	0.1%
Buses	1	2	0	**3**	-	1	0	0	**1**	-	0	1	0	**1**	-	5
% Buses	0.1%	2.0%	0%	**0.4%**	-	1.3%	0%	0%	**0.6%**	-	0%	0.2%	0%	**0.1%**	-	0.3%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	1	1	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	1.1%	0.2%	0%	**0.3%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*	HR	R	T	L	U	**App**	Ped*
2023-05-04 6:00AM	0	34	0	1	0	**35**	0	10	0	0	0	0	**10**	0	0	0	0	1	0	**1**	0
6:15AM	2	59	0	0	0	**61**	0	10	0	0	0	0	**10**	0	0	0	0	1	0	**1**	1
6:30AM	3	75	0	3	0	**81**	0	17	0	0	0	0	**17**	0	0	0	0	1	0	**1**	0
6:45AM	8	80	0	5	0	**93**	0	22	0	0	0	0	**22**	0	0	1	0	1	0	**2**	2
Hourly Total	13	248	0	9	0	**270**	0	59	0	0	0	0	**59**	0	0	1	0	4	0	**5**	3
7:00AM	1	91	0	7	0	**99**	0	27	0	0	0	0	**27**	0	0	0	0	2	1	**3**	0
7:15AM	0	97	0	9	0	**106**	0	23	0	0	0	0	**23**	0	0	0	0	1	0	**1**	0
7:30AM	4	108	0	14	0	**126**	0	22	0	0	0	0	**22**	3	0	0	0	2	0	**2**	0
7:45AM	3	134	0	9	0	**146**	0	23	1	0	0	0	**24**	0	0	0	1	2	0	**3**	0
Hourly Total	8	430	0	39	0	**477**	0	95	1	0	0	0	**96**	3	0	0	1	7	1	**9**	0
8:00AM	3	152	0	8	0	**163**	0	17	0	0	0	0	**17**	1	0	1	0	0	0	**1**	0
8:15AM	6	89	1	11	0	**107**	0	16	2	0	0	0	**18**	1	0	0	0	6	0	**6**	1
8:30AM	8	141	0	21	0	**170**	0	41	0	0	0	0	**41**	0	0	0	0	2	0	**2**	0
8:45AM	6	110	0	3	0	**119**	0	14	0	0	0	0	**14**	0	0	0	0	1	0	**1**	0
Hourly Total	23	492	1	43	0	**559**	0	88	2	0	0	0	**90**	2	0	1	0	9	0	**10**	1
3:00PM	5	199	0	7	0	**211**	0	13	0	0	0	0	**13**	0	0	0	0	3	0	**3**	0
3:15PM	9	190	0	14	0	**213**	0	10	1	0	0	0	**11**	0	0	2	4	3	0	**9**	3
3:30PM	7	219	0	18	0	**244**	0	13	1	0	0	0	**14**	0	0	0	3	1	0	**4**	0
3:45PM	16	225	0	14	0	**255**	0	15	2	0	0	0	**17**	0	0	0	4	0	0	**4**	1
Hourly Total	37	833	0	53	0	**923**	0	51	4	0	0	0	**55**	0	0	2	11	7	0	**20**	4
4:00PM	10	251	0	8	0	**269**	0	9	0	0	0	0	**9**	0	0	0	0	0	0	**0**	0
4:15PM	4	214	0	16	0	**234**	0	13	0	0	0	0	**13**	1	0	0	0	1	0	**1**	1
4:30PM	6	236	0	16	0	**258**	0	11	1	0	0	0	**12**	0	0	0	0	1	0	**1**	0
4:45PM	15	227	0	10	0	**252**	0	16	0	0	0	0	**16**	0	0	0	0	1	0	**1**	1
Hourly Total	35	928	0	50	0	**1013**	0	49	1	0	0	0	**50**	1	0	0	0	3	0	**3**	2
5:00PM	10	225	0	9	0	**244**	0	18	0	0	0	0	**18**	1	0	0	1	1	0	**2**	2
5:15PM	4	225	0	13	0	**242**	0	20	0	0	0	0	**20**	0	0	0	0	1	0	**1**	0
5:30PM	6	194	0	20	0	**220**	0	16	0	0	0	0	**16**	0	0	0	1	2	0	**3**	1
5:45PM	4	199	0	21	0	**224**	0	19	0	0	0	0	**19**	0	0	0	0	0	0	**0**	0
Hourly Total	24	843	0	63	0	**930**	0	73	0	0	0	0	**73**	1	0	0	2	4	0	**6**	3
2023-05-06 11:00AM	2	145	0	14	0	**161**	0	15	0	0	0	0	**15**	1	0	0	0	3	0	**3**	1
11:15AM	4	164	0	9	0	**177**	0	15	1	0	0	0	**16**	0	0	0	0	1	0	**1**	0
11:30AM	1	170	0	11	0	**182**	0	19	0	0	0	0	**19**	0	0	0	0	1	0	**1**	0
11:45AM	1	172	0	13	0	**186**	0	19	1	0	0	0	**20**	2	0	0	0	3	0	**3**	4
Hourly Total	8	651	0	47	0	**706**	0	68	2	0	0	0	**70**	3	0	0	0	8	0	**8**	5
12:00PM	3	167	2	13	0	**185**	0	14	1	0	0	0	**15**	2	0	0	0	2	0	**2**	1
12:15PM	10	170	0	21	0	**201**	0	6	0	0	0	0	**6**	0	0	0	0	2	0	**2**	0
12:30PM	7	186	0	10	0	**203**	0	15	0	0	0	0	**15**	1	0	0	1	2	0	**3**	0
12:45PM	2	185	0	18	0	**205**	0	12	0	0	0	0	**12**	0	0	0	0	2	0	**2**	0
Hourly Total	22	708	2	62	0	**794**	0	47	1	0	0	0	**48**	3	0	0	1	8	0	**9**	1
1:00PM	0	212	0	12	0	**224**	0	9	0	1	0	0	**10**	0	0	0	0	3	0	**3**	0
1:15PM	1	160	0	16	1	**178**	0	13	1	0	0	0	**14**	0	0	0	0	2	0	**2**	0
1:30PM	0	185	1	17	0	**203**	0	7	1	0	0	0	**8**	2	0	0	1	3	0	**4**	2
1:45PM	1	165	1	15	0	**182**	0	11	0	0	0	0	**11**	1	0	0	0	1	0	**1**	1
Hourly Total	2	722	2	60	1	**787**	0	40	2	1	0	0	**43**	3	0	0	1	9	0	**10**	3
Total	172	5855	5	426	1	**6459**	0	570	13	1	0	0	**584**	16	0	4	16	59	1	**80**	22
% Approach	2.7%	90.6%	0.1%	6.6%	0%	**-**	-	97.6%	2.2%	0.2%	0%	0%	**-**	-	0%	5.0%	20.0%	73.8%	1.3%	**-**	-
% Total	1.2%	41.0%	0%	3.0%	0%	**45.2%**	-	4.0%	0.1%	0%	0%	0%	**4.1%**	-	0%	0%	0.1%	0.4%	0%	**0.6%**	-
Motorcycles	0	16	0	0	0	**16**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	0.3%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	170	5690	5	417	1	**6283**	-	559	13	1	0	0	**573**	-	0	4	16	54	1	**75**	-
% Lights	98.8%	97.2%	100%	97.9%	100%	**97.3%**	-	98.1%	100%	100%	0%	0%	**98.1%**	-	0%	100%	100%	91.5%	100%	**93.8%**	-

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*	HR	R	T	L	U	**App**	Ped*
Single-Unit Trucks	2	96	0	7	0	**105**	-	2	0	0	0	0	**2**	-	0	0	0	2	0	**2**	-
% Single-Unit Trucks	1.2%	1.6%	0%	1.6%	0%	**1.6%**	-	0.4%	0%	0%	0%	0%	**0.3%**	-	0%	0%	0%	3.4%	0%	**2.5%**	-
Articulated Trucks	0	21	0	0	0	**21**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0.4%	0%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	31	0	2	0	**33**	-	9	0	0	0	0	**9**	-	0	0	0	3	0	**3**	-
% Buses	0%	0.5%	0%	0.5%	0%	**0.5%**	-	1.6%	0%	0%	0%	0%	**1.5%**	-	0%	0%	0%	5.1%	0%	**3.8%**	-
Bicycles on Road	0	1	0	0	0	**1**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	16	-	-	-	-	-	-	22
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Plaza Driveway							
Direction	Northbound							Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
2023-05-04 6:00AM	0	0	187	1	0	**188**	0	0	0	0	0	0	**0**	0	**234**
6:15AM	0	0	206	2	0	**208**	0	0	0	0	0	0	**0**	0	**280**
6:30AM	0	0	223	1	0	**224**	0	1	0	0	2	0	**3**	0	**326**
6:45AM	0	0	265	2	0	**267**	0	0	0	0	1	0	**1**	0	**385**
Hourly Total	0	0	881	6	0	**887**	0	1	0	0	3	0	**4**	0	**1225**
7:00AM	3	1	258	1	0	**263**	1	0	0	0	2	0	**2**	0	**394**
7:15AM	3	0	210	1	0	**214**	0	1	0	0	0	0	**1**	0	**345**
7:30AM	2	0	220	3	0	**225**	0	0	0	0	2	0	**2**	0	**377**
7:45AM	2	0	226	2	0	**230**	0	1	0	0	3	0	**4**	1	**407**
Hourly Total	10	1	914	7	0	**932**	1	2	0	0	7	0	**9**	1	**1523**
8:00AM	1	0	245	2	0	**248**	0	0	0	0	0	0	**0**	0	**429**
8:15AM	2	0	234	1	0	**237**	0	2	0	0	1	0	**3**	0	**371**
8:30AM	3	0	215	4	0	**222**	0	0	0	0	2	0	**2**	0	**437**
8:45AM	1	0	211	2	0	**214**	0	1	0	1	2	0	**4**	0	**352**
Hourly Total	7	0	905	9	0	**921**	0	3	0	1	5	0	**9**	0	**1589**
3:00PM	3	0	152	3	0	**158**	0	6	0	0	5	0	**11**	0	**396**
3:15PM	1	0	154	7	0	**162**	12	5	0	2	3	0	**10**	0	**405**
3:30PM	1	0	168	0	0	**169**	0	8	1	1	3	0	**13**	0	**444**
3:45PM	2	0	161	7	0	**170**	3	2	0	2	5	0	**9**	0	**455**
Hourly Total	7	0	635	17	0	**659**	15	21	1	5	16	0	**43**	0	**1700**
4:00PM	0	0	146	5	0	**151**	0	9	3	1	10	0	**23**	1	**452**
4:15PM	2	0	171	2	0	**175**	1	3	3	1	8	0	**15**	0	**438**
4:30PM	2	0	159	2	0	**163**	0	3	1	1	4	0	**9**	0	**443**
4:45PM	3	0	178	15	0	**196**	0	4	1	1	3	0	**9**	0	**474**
Hourly Total	7	0	654	24	0	**685**	1	19	8	4	25	0	**56**	1	**1807**
5:00PM	2	0	184	6	0	**192**	2	11	14	2	26	0	**53**	0	**509**
5:15PM	1	0	166	1	0	**168**	2	4	2	0	7	0	**13**	0	**444**
5:30PM	1	0	161	4	0	**166**	0	1	0	0	3	0	**4**	0	**409**
5:45PM	1	0	174	2	0	**177**	1	4	2	0	17	0	**23**	0	**443**
Hourly Total	5	0	685	13	0	**703**	5	20	18	2	53	0	**93**	0	**1805**
2023-05-06 11:00AM	2	0	153	0	0	**155**	0	3	0	0	2	0	**5**	0	**339**
11:15AM	1	0	167	1	0	**169**	0	1	0	0	0	0	**1**	0	**364**
11:30AM	3	0	169	1	0	**173**	0	2	0	1	4	0	**7**	0	**382**
11:45AM	1	0	167	0	0	**168**	0	1	0	0	1	0	**2**	1	**379**
Hourly Total	7	0	656	2	0	**665**	0	7	0	1	7	0	**15**	1	**1464**
12:00PM	1	0	157	1	0	**159**	0	1	0	0	2	0	**3**	0	**364**
12:15PM	3	0	202	1	0	**206**	0	5	1	0	1	0	**7**	0	**422**
12:30PM	3	0	183	2	0	**188**	0	8	0	0	11	0	**19**	0	**428**
12:45PM	1	0	180	0	0	**181**	0	0	0	0	1	0	**1**	0	**401**
Hourly Total	8	0	722	4	0	**734**	0	14	1	0	15	0	**30**	0	**1615**
1:00PM	2	0	182	1	0	**185**	1	0	0	0	0	0	**0**	0	**422**
1:15PM	3	0	174	1	0	**178**	1	1	0	0	0	0	**1**	2	**373**
1:30PM	0	1	151	0	0	**152**	0	2	0	0	6	0	**8**	0	**375**
1:45PM	0	0	182	1	0	**183**	0	1	0	0	0	0	**1**	0	**378**
Hourly Total	5	1	689	3	0	**698**	2	4	0	0	6	0	**10**	2	**1548**
Total	56	2	6741	85	0	**6884**	24	91	28	13	137	0	**269**	5	**14276**
% Approach	0.8%	0%	97.9%	1.2%	0%	**-**	-	33.8%	10.4%	4.8%	50.9%	0%	**-**	-	-
% Total	0.4%	0%	47.2%	0.6%	0%	**48.2%**	-	0.6%	0.2%	0.1%	1.0%	0%	**1.9%**	-	-
Motorcycles	0	0	14	0	0	**14**	-	0	0	0	0	0	**0**	-	30
% Motorcycles	0%	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	0%	**0%**	-	0.2%
Lights	54	2	6591	85	0	**6732**	-	90	28	13	136	0	**267**	-	13930
% Lights	96.4%	100%	97.8%	100%	0%	**97.8%**	-	98.9%	100%	100%	99.3%	0%	**99.3%**	-	97.6%

Leg Direction	Washington Street (Route 37) Northbound							Plaza Driveway Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
Single-Unit Trucks	2	0	75	0	0	**77**	-	1	0	0	1	0	**2**	-	188
% Single-Unit Trucks	3.6%	0%	1.1%	0%	0%	**1.1%**	-	1.1%	0%	0%	0.7%	0%	**0.7%**	-	1.3%
Articulated Trucks	0	0	25	0	0	**25**	-	0	0	0	0	0	**0**	-	46
% Articulated Trucks	0%	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	0	31	0	0	**31**	-	0	0	0	0	0	**0**	-	76
% Buses	0%	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-	0.5%
Bicycles on Road	0	0	5	0	0	**5**	-	0	0	0	0	0	**0**	-	6
% Bicycles on Road	0%	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	-	20	-	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	83.3%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	4	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	16.7%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*	HR	R	T	L	U	**App**	Ped*
2023-05-04 7:45AM	3	134	0	9	0	**146**	0	23	1	0	0	0	**24**	0	0	0	1	2	0	**3**	0
8:00AM	3	152	0	8	0	**163**	0	17	0	0	0	0	**17**	1	0	1	0	0	0	**1**	0
8:15AM	6	89	1	11	0	**107**	0	16	2	0	0	0	**18**	1	0	0	0	6	0	**6**	1
8:30AM	8	141	0	21	0	**170**	0	41	0	0	0	0	**41**	0	0	0	0	2	0	**2**	0
Total	20	516	1	49	0	**586**	0	97	3	0	0	0	**100**	2	0	1	1	10	0	**12**	1
% Approach	3.4%	88.1%	0.2%	8.4%	0%	**-**	-	97.0%	3.0%	0%	0%	0%	**-**	-	0%	8.3%	8.3%	83.3%	0%	**-**	-
% Total	1.2%	31.4%	0.1%	3.0%	0%	**35.6%**	-	5.9%	0.2%	0%	0%	0%	**6.1%**	-	0%	0.1%	0.1%	0.6%	0%	**0.7%**	-
PHF	0.625	0.847	0.250	0.583	-	**0.860**	-	0.591	0.375	-	-	-	**0.610**	-	-	0.250	0.250	0.417	-	**0.500**	-
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	20	492	1	49	0	**562**	-	93	3	0	0	0	**96**	-	0	1	1	9	0	**11**	-
% Lights	100%	95.3%	100%	100%	0%	**95.9%**	-	95.9%	100%	0%	0%	0%	**96.0%**	-	0%	100%	100%	90.0%	0%	**91.7%**	-
Single-Unit Trucks	0	12	0	0	0	**12**	-	0	0	0	0	0	**0**	-	0	0	0	1	0	**1**	-
% Single-Unit Trucks	0%	2.3%	0%	0%	0%	**2.0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	10.0%	0%	**8.3%**	-
Articulated Trucks	0	3	0	0	0	**3**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0.6%	0%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	8	0	0	0	**8**	-	4	0	0	0	0	**4**	-	0	0	0	0	0	**0**	-
% Buses	0%	1.6%	0%	0%	0%	**1.4%**	-	4.1%	0%	0%	0%	0%	**4.0%**	-	0%	0%	0%	0%	0%	**0%**	-
Bicycles on Road	0	1	0	0	0	**1**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0.2%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Plaza Driveway							
Direction	Northbound							Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	2	0	226	2	0	**230**	0	1	0	0	3	0	**4**	1	**407**
8:00AM	1	0	245	2	0	**248**	0	0	0	0	0	0	**0**	0	**429**
8:15AM	2	0	234	1	0	**237**	0	2	0	0	1	0	**3**	0	**371**
8:30AM	3	0	215	4	0	**222**	0	0	0	0	2	0	**2**	0	**437**
Total	8	0	920	9	0	**937**	0	3	0	0	6	0	**9**	1	**1644**
% Approach	0.9%	0%	98.2%	1.0%	0%	**-**	-	33.3%	0%	0%	66.7%	0%	**-**	-	**-**
% Total	0.5%	0%	56.0%	0.5%	0%	**57.0%**	-	0.2%	0%	0%	0.4%	0%	**0.5%**	-	**-**
PHF	0.667	-	0.939	0.563	-	**0.945**	-	0.375	-	-	0.500	-	**0.563**	-	0.940
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Lights	6	0	894	9	0	**909**	-	3	0	0	6	0	**9**	-	1587
% Lights	75.0%	0%	97.2%	100%	0%	**97.0%**	-	100%	0%	0%	100%	0%	**100%**	-	96.5%
Single-Unit Trucks	2	0	15	0	0	**17**	-	0	0	0	0	0	**0**	-	30
% Single-Unit Trucks	25.0%	0%	1.6%	0%	0%	**1.8%**	-	0%	0%	0%	0%	0%	**0%**	-	1.8%
Articulated Trucks	0	0	6	0	0	**6**	-	0	0	0	0	0	**0**	-	9
% Articulated Trucks	0%	0%	0.7%	0%	0%	**0.6%**	-	0%	0%	0%	0%	0%	**0%**	-	0.5%
Buses	0	0	5	0	0	**5**	-	0	0	0	0	0	**0**	-	17
% Buses	0%	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-	1.0%
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*	HR	R	T	L	U	**App**	Ped*
2023-05-04 4:30PM	6	236	0	16	0	**258**	0	11	1	0	0	0	**12**	0	0	0	0	1	0	**1**	0
4:45PM	15	227	0	10	0	**252**	0	16	0	0	0	0	**16**	0	0	0	0	1	0	**1**	1
5:00PM	10	225	0	9	0	**244**	0	18	0	0	0	0	**18**	1	0	0	1	1	0	**2**	2
5:15PM	4	225	0	13	0	**242**	0	20	0	0	0	0	**20**	0	0	0	0	1	0	**1**	0
Total	35	913	0	48	0	**996**	0	65	1	0	0	0	**66**	1	0	0	1	4	0	**5**	3
% Approach	3.5%	91.7%	0%	4.8%	0%	**-**	-	98.5%	1.5%	0%	0%	0%	**-**	-	0%	0%	20.0%	80.0%	0%	**-**	-
% Total	1.9%	48.8%	0%	2.6%	0%	**53.3%**	-	3.5%	0.1%	0%	0%	0%	**3.5%**	-	0%	0%	0.1%	0.2%	0%	**0.3%**	-
PHF	0.583	0.967	-	0.750	-	**0.965**	-	0.813	0.250	-	-	-	**0.825**	-	-	-	0.250	1.000	-	**0.625**	-
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	35	889	0	48	0	**972**	-	64	1	0	0	0	**65**	-	0	0	1	4	0	**5**	-
% Lights	100%	97.4%	0%	100%	0%	**97.6%**	-	98.5%	100%	0%	0%	0%	**98.5%**	-	0%	0%	100%	100%	0%	**100%**	-
Single-Unit Trucks	0	19	0	0	0	**19**	-	1	0	0	0	0	**1**	-	0	0	0	0	0	**0**	-
% Single-Unit Trucks	0%	2.1%	0%	0%	0%	**1.9%**	-	1.5%	0%	0%	0%	0%	**1.5%**	-	0%	0%	0%	0%	0%	**0%**	-
Articulated Trucks	0	3	0	0	0	**3**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0.3%	0%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	2	0	0	0	**2**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Buses	0%	0.2%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Plaza Driveway							
Direction	Northbound							Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
2023-05-04 4:30PM	2	0	159	2	0	**163**	0	3	1	1	4	0	**9**	0	**443**
4:45PM	3	0	178	15	0	**196**	0	4	1	1	3	0	**9**	0	**474**
5:00PM	2	0	184	6	0	**192**	2	11	14	2	26	0	**53**	0	**509**
5:15PM	1	0	166	1	0	**168**	2	4	2	0	7	0	**13**	0	**444**
Total	8	0	687	24	0	**719**	4	22	18	4	40	0	**84**	0	**1870**
% Approach	1.1%	0%	95.5%	3.3%	0%	**-**	-	26.2%	21.4%	4.8%	47.6%	0%	**-**	-	**-**
% Total	0.4%	0%	36.7%	1.3%	0%	**38.4%**	-	1.2%	1.0%	0.2%	2.1%	0%	**4.5%**	-	**-**
PHF	0.667	-	0.933	0.400	-	**0.917**	-	0.500	0.321	0.500	0.385	-	**0.396**	-	0.918
Motorcycles	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Lights	8	0	678	24	0	**710**	-	22	18	4	40	0	**84**	-	1836
% Lights	100%	0%	98.7%	100%	0%	**98.7%**	-	100%	100%	100%	100%	0%	**100%**	-	98.2%
Single-Unit Trucks	0	0	7	0	0	**7**	-	0	0	0	0	0	**0**	-	27
% Single-Unit Trucks	0%	0%	1.0%	0%	0%	**1.0%**	-	0%	0%	0%	0%	0%	**0%**	-	1.4%
Articulated Trucks	0	0	2	0	0	**2**	-	0	0	0	0	0	**0**	-	5
% Articulated Trucks	0%	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	2
% Buses	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	-	4	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	App	Ped*	HR	BR	BL	HL	U	App	Ped*	HR	R	T	L	U	App	Ped*
2023-05-06 12:15PM	10	170	0	21	0	**201**	0	6	0	0	0	0	**6**	0	0	0	0	2	0	**2**	0
12:30PM	7	186	0	10	0	**203**	0	15	0	0	0	0	**15**	1	0	0	1	2	0	**3**	0
12:45PM	2	185	0	18	0	**205**	0	12	0	0	0	0	**12**	0	0	0	0	2	0	**2**	0
1:00PM	0	212	0	12	0	**224**	0	9	0	1	0	0	**10**	0	0	0	0	3	0	**3**	0
Total	19	753	0	61	0	**833**	0	42	0	1	0	0	**43**	1	0	0	1	9	0	**10**	0
% Approach	2.3%	90.4%	0%	7.3%	0%	**-**	-	97.7%	0%	2.3%	0%	0%	**-**	-	0%	0%	10.0%	90.0%	0%	**-**	-
% Total	1.1%	45.0%	0%	3.6%	0%	**49.8%**	-	2.5%	0%	0.1%	0%	0%	**2.6%**	-	0%	0%	0.1%	0.5%	0%	**0.6%**	-
PHF	0.475	0.888	-	0.726	-	**0.930**	-	0.700	-	0.250	-	-	**0.717**	-	-	-	0.250	0.750	-	**0.833**	-
Motorcycles	0	8	0	0	0	**8**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	1.1%	0%	0%	0%	**1.0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	19	733	0	60	0	**812**	-	42	0	1	0	0	**43**	-	0	0	1	8	0	**9**	-
% Lights	100%	97.3%	0%	98.4%	0%	**97.5%**	-	100%	0%	100%	0%	0%	**100%**	-	0%	0%	100%	88.9%	0%	**90.0%**	-
Single-Unit Trucks	0	11	0	1	0	**12**	-	0	0	0	0	0	**0**	-	0	0	0	1	0	**1**	-
% Single-Unit Trucks	0%	1.5%	0%	1.6%	0%	**1.4%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	11.1%	0%	**10.0%**	-
Articulated Trucks	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	1	0	0	0	**1**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Buses	0%	0.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Plaza Driveway							
Direction	Northbound							Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	3	0	202	1	0	**206**	0	5	1	0	1	0	**7**	0	**422**
12:30PM	3	0	183	2	0	**188**	0	8	0	0	11	0	**19**	0	**428**
12:45PM	1	0	180	0	0	**181**	0	0	0	0	1	0	**1**	0	**401**
1:00PM	2	0	182	1	0	**185**	1	0	0	0	0	0	**0**	0	**422**
Total	9	0	747	4	0	**760**	1	13	1	0	13	0	**27**	0	**1673**
% Approach	1.2%	0%	98.3%	0.5%	0%	**-**	-	48.1%	3.7%	0%	48.1%	0%	**-**	-	**-**
% Total	0.5%	0%	44.7%	0.2%	0%	**45.4%**	-	0.8%	0.1%	0%	0.8%	0%	**1.6%**	-	**-**
PHF	0.750	-	0.920	0.500	-	**0.917**	-	0.406	0.250	-	0.295	-	**0.355**	-	0.979
Motorcycles	0	0	5	0	0	**5**	-	0	0	0	0	0	**0**	-	13
% Motorcycles	0%	0%	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	0%	0%	**0%**	-	0.8%
Lights	9	0	730	4	0	**743**	-	13	1	0	13	0	**27**	-	1634
% Lights	100%	0%	97.7%	100%	0%	**97.8%**	-	100%	100%	0%	100%	0%	**100%**	-	97.7%
Single-Unit Trucks	0	0	7	0	0	**7**	-	0	0	0	0	0	**0**	-	20
% Single-Unit Trucks	0%	0%	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	1	0	0	**1**	-	0	0	0	0	0	**0**	-	2
% Buses	0%	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	0	0	4	0	0	**4**	-	0	0	0	0	0	**0**	-	4
% Bicycles on Road	0%	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	0%	**0%**	-	0.2%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Standish Avenue							Park Avenue						
Direction	Southbound							Southwestbound							Westbound						
Time	R	T	L	HL	U	**App**	Ped*	HR	BR	BL	HL	U	**App**	Ped*	HR	R	T	L	U	**App**	Ped*
2023-05-06 1:00PM	0	212	0	12	0	**224**	0	9	0	1	0	0	**10**	0	0	0	0	3	0	**3**	0
1:15PM	1	160	0	16	1	**178**	0	13	1	0	0	0	**14**	0	0	0	0	2	0	**2**	0
1:30PM	0	185	1	17	0	**203**	0	7	1	0	0	0	**8**	2	0	0	1	3	0	**4**	2
1:45PM	1	165	1	15	0	**182**	0	11	0	0	0	0	**11**	1	0	0	0	1	0	**1**	1
Total	2	722	2	60	1	**787**	0	40	2	1	0	0	**43**	3	0	0	1	9	0	**10**	3
% Approach	0.3%	91.7%	0.3%	7.6%	0.1%	**-**	-	93.0%	4.7%	2.3%	0%	0%	**-**	-	0%	0%	10.0%	90.0%	0%	**-**	-
% Total	0.1%	46.6%	0.1%	3.9%	0.1%	**50.8%**	-	2.6%	0.1%	0.1%	0%	0%	**2.8%**	-	0%	0%	0.1%	0.6%	0%	**0.6%**	-
PHF	0.500	0.851	0.500	0.882	0.250	**0.878**	-	0.769	0.500	0.250	-	-	**0.768**	-	-	-	0.250	0.750	-	**0.625**	-
Motorcycles	0	3	0	0	0	**3**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Motorcycles	0%	0.4%	0%	0%	0%	**0.4%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Lights	2	706	2	60	1	**771**	-	40	2	1	0	0	**43**	-	0	0	1	8	0	**9**	-
% Lights	100%	97.8%	100%	100%	100%	**98.0%**	-	100%	100%	100%	0%	0%	**100%**	-	0%	0%	100%	88.9%	0%	**90.0%**	-
Single-Unit Trucks	0	10	0	0	0	**10**	-	0	0	0	0	0	**0**	-	0	0	0	1	0	**1**	-
% Single-Unit Trucks	0%	1.4%	0%	0%	0%	**1.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	11.1%	0%	**10.0%**	-
Articulated Trucks	0	1	0	0	0	**1**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Articulated Trucks	0%	0.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Buses	0	2	0	0	0	**2**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Buses	0%	0.3%	0%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Bicycles on Road	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (14) Washington @ Standish/Park TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065032, Location: 42.181696, -71.013498

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)							Plaza Driveway							
Direction	Northbound							Eastbound							
Time	R	BR	T	L	U	**App**	Ped*	R	T	BL	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	2	0	182	1	0	**185**	1	0	0	0	0	0	**0**	0	**422**
1:15PM	3	0	174	1	0	**178**	1	1	0	0	0	0	**1**	2	**373**
1:30PM	0	1	151	0	0	**152**	0	2	0	0	6	0	**8**	0	**375**
1:45PM	0	0	182	1	0	**183**	0	1	0	0	0	0	**1**	0	**378**
Total	5	1	689	3	0	**698**	2	4	0	0	6	0	**10**	2	**1548**
% Approach	0.7%	0.1%	98.7%	0.4%	0%	**-**	-	40.0%	0%	0%	60.0%	0%	**-**	-	-
% Total	0.3%	0.1%	44.5%	0.2%	0%	**45.1%**	-	0.3%	0%	0%	0.4%	0%	**0.6%**	-	-
PHF	0.417	0.250	0.944	0.750	-	**0.951**	-	0.500	-	-	0.250	-	**0.313**	-	0.920
Motorcycles	0	0	9	0	0	**9**	-	0	0	0	0	0	**0**	-	12
% Motorcycles	0%	0%	1.3%	0%	0%	**1.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0.8%
Lights	5	1	671	3	0	**680**	-	4	0	0	6	0	**10**	-	1513
% Lights	100%	100%	97.4%	100%	0%	**97.4%**	-	100%	0%	0%	100%	0%	**100%**	-	97.7%
Single-Unit Trucks	0	0	6	0	0	**6**	-	0	0	0	0	0	**0**	-	17
% Single-Unit Trucks	0%	0%	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	0%	0%	**0%**	-	1.1%
Articulated Trucks	0	0	0	0	0	**0**	-	0	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	1	0	0	**1**	-	0	0	0	0	0	**0**	-	3
% Buses	0%	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	2	0	0	**2**	-	0	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

239319 (15) Washington @ South TMC - TMC

Thu May 4, 2023
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065033, Location: 42.175195, -71.013042

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Driveway						Washington Street (Route 37)						South Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	12	24	0	0	**36**	0	0	0	0	0	**0**	2	0	147	7	0	**154**	1	6	0	31	0	**37**	0	**227**
6:15AM	20	44	0	0	**64**	0	0	0	0	0	**0**	2	0	159	8	0	**167**	1	4	0	40	0	**44**	0	**275**
6:30AM	27	48	0	0	**75**	0	0	0	0	0	**0**	4	0	166	4	0	**170**	0	6	0	48	0	**54**	0	**299**
6:45AM	41	48	0	0	**89**	2	0	0	0	0	**0**	5	0	194	11	0	**205**	0	6	0	65	0	**71**	0	**365**
Hourly Total	100	164	0	0	**264**	2	0	0	0	0	**0**	13	0	666	30	0	**696**	2	22	0	184	0	**206**	0	**1166**
7:00AM	41	52	0	0	**93**	1	0	0	0	0	**0**	0	0	195	22	0	**217**	0	8	0	61	0	**69**	0	**379**
7:15AM	33	60	0	0	**93**	0	0	0	0	0	**0**	0	0	158	27	0	**185**	0	22	0	69	0	**91**	0	**369**
7:30AM	54	55	0	0	**109**	0	0	0	0	0	**0**	0	0	141	22	0	**163**	1	30	0	80	0	**110**	0	**382**
7:45AM	63	76	0	0	**139**	0	0	0	0	0	**0**	0	0	152	23	1	**176**	0	25	0	71	0	**96**	0	**411**
Hourly Total	191	243	0	0	**434**	1	0	0	0	0	**0**	0	0	646	94	1	**741**	1	85	0	281	0	**366**	0	**1541**
8:00AM	59	87	0	0	**146**	0	1	0	0	0	**1**	0	0	169	36	0	**205**	0	15	0	39	0	**54**	0	**406**
8:15AM	53	63	0	0	**116**	0	0	0	0	0	**0**	1	0	152	37	0	**189**	1	23	0	50	0	**73**	0	**378**
8:30AM	54	82	0	0	**136**	0	0	0	0	0	**0**	1	0	144	22	0	**166**	0	26	0	65	0	**91**	1	**393**
8:45AM	47	67	0	0	**114**	0	0	0	0	0	**0**	0	0	147	23	0	**170**	0	17	0	56	0	**73**	0	**357**
Hourly Total	213	299	0	0	**512**	0	1	0	0	0	**1**	2	0	612	118	0	**730**	1	81	0	210	0	**291**	1	**1534**
3:00PM	73	133	0	0	**206**	0	0	0	0	0	**0**	0	0	96	25	0	**121**	0	20	0	57	0	**77**	0	**404**
3:15PM	57	132	0	0	**189**	0	0	0	0	0	**0**	1	0	95	17	0	**112**	3	22	0	52	0	**74**	1	**375**
3:30PM	49	157	0	0	**206**	0	0	0	0	0	**0**	0	0	115	15	0	**130**	0	16	0	58	0	**74**	0	**410**
3:45PM	61	142	0	0	**203**	0	0	0	0	0	**0**	0	0	100	13	0	**113**	0	21	0	51	0	**72**	0	**388**
Hourly Total	240	564	0	0	**804**	0	0	0	0	0	**0**	1	0	406	70	0	**476**	3	79	0	218	0	**297**	1	**1577**
4:00PM	73	185	0	0	**258**	0	0	0	0	0	**0**	0	0	83	11	0	**94**	1	23	0	61	0	**84**	5	**436**
4:15PM	62	153	0	0	**215**	0	0	0	0	0	**0**	0	0	105	12	0	**117**	1	22	0	68	0	**90**	1	**422**
4:30PM	66	164	0	0	**230**	0	0	0	0	0	**0**	0	1	101	11	0	**113**	0	15	1	57	0	**73**	1	**416**
4:45PM	64	165	0	0	**229**	0	0	0	0	0	**0**	0	0	122	22	0	**144**	2	25	0	63	0	**88**	0	**461**
Hourly Total	265	667	0	0	**932**	0	0	0	0	0	**0**	0	1	411	56	0	**468**	4	85	1	249	0	**335**	7	**1735**
5:00PM	63	156	0	0	**219**	0	0	0	0	0	**0**	0	0	113	8	0	**121**	0	19	0	70	0	**89**	1	**429**
5:15PM	60	164	0	0	**224**	0	0	0	0	0	**0**	0	0	94	17	0	**111**	0	28	0	63	0	**91**	0	**426**
5:30PM	58	137	0	0	**195**	0	0	0	0	0	**0**	0	0	91	21	0	**112**	0	22	0	63	0	**85**	0	**392**
5:45PM	36	150	0	0	**186**	0	0	0	0	0	**0**	0	0	108	16	0	**124**	0	13	0	55	0	**68**	1	**378**
Hourly Total	217	607	0	0	**824**	0	0	0	0	0	**0**	0	0	406	62	0	**468**	0	82	0	251	0	**333**	2	**1625**
2023-05-06 11:00AM	55	92	0	0	**147**	0	0	0	0	0	**0**	0	0	115	13	0	**128**	2	16	0	39	0	**55**	2	**330**
11:15AM	44	94	1	0	**139**	0	0	0	0	0	**0**	0	0	112	17	0	**129**	0	23	0	37	0	**60**	0	**328**
11:30AM	53	112	0	0	**165**	0	1	0	0	0	**1**	0	0	127	12	0	**139**	0	20	0	46	0	**66**	0	**371**
11:45AM	46	110	0	1	**157**	0	0	1	0	0	**1**	2	0	112	15	0	**127**	2	14	0	46	1	**61**	0	**346**
Hourly Total	198	408	1	1	**608**	0	1	1	0	0	**2**	2	0	466	57	0	**523**	4	73	0	168	1	**242**	2	**1375**
12:00PM	50	118	0	0	**168**	0	0	0	0	0	**0**	2	0	102	18	0	**120**	0	14	0	35	0	**49**	2	**337**
12:15PM	36	133	0	0	**169**	0	0	0	0	0	**0**	3	0	143	9	0	**152**	3	16	0	56	0	**72**	0	**393**
12:30PM	60	129	0	0	**189**	0	0	0	0	0	**0**	4	0	143	24	0	**167**	0	19	0	44	0	**63**	0	**419**
12:45PM	50	121	0	0	**171**	0	0	0	0	0	**0**	1	0	118	18	0	**136**	0	11	0	51	0	**62**	0	**369**
Hourly Total	196	501	0	0	**697**	0	0	0	0	0	**0**	10	0	506	69	0	**575**	3	60	0	186	0	**246**	2	**1518**
1:00PM	52	151	0	0	**203**	0	0	0	0	0	**0**	1	0	119	20	0	**139**	0	15	0	49	0	**64**	1	**406**
1:15PM	54	110	0	0	**164**	0	0	0	0	0	**0**	6	0	122	13	0	**135**	1	9	0	50	0	**59**	0	**358**
1:30PM	63	119	0	0	**182**	0	0	0	0	0	**0**	1	0	112	16	0	**128**	0	18	0	40	0	**58**	0	**368**
1:45PM	35	115	1	0	**151**	1	0	0	0	0	**0**	2	0	128	19	0	**147**	0	24	0	49	0	**73**	2	**371**
Hourly Total	204	495	1	0	**700**	1	0	0	0	0	**0**	10	0	481	68	0	**549**	1	66	0	188	0	**254**	3	**1503**
Total	1824	3948	2	1	**5775**	4	2	1	0	0	**3**	38	1	4600	624	1	**5226**	19	633	1	1935	1	**2570**	18	**13574**
% Approach	31.6%	68.4%	0%	0%	**-**	-	66.7%	33.3%	0%	0%	**-**	-	0%	88.0%	11.9%	0%	**-**	-	24.6%	0%	75.3%	0%	**-**	-	-
% Total	13.4%	29.1%	0%	0%	**42.5%**	-	0%	0%	0%	0%	**0%**	-	0%	33.9%	4.6%	0%	**38.5%**	-	4.7%	0%	14.3%	0%	**18.9%**	-	-
Motorcycles	1	13	0	0	**14**	-	0	0	0	0	**0**	-	0	9	1	0	**10**	-	2	0	1	0	**3**	-	27
% Motorcycles	0.1%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0.2%	0%	**0.2%**	-	0.3%	0%	0.1%	0%	**0.1%**	-	0.2%
Lights	1780	3837	2	1	**5620**	-	2	1	0	0	**3**	-	1	4482	610	1	**5094**	-	618	1	1906	1	**2526**	-	13243
% Lights	97.6%	97.2%	100%	100%	**97.3%**	-	100%	100%	0%	0%	**100%**	-	100%	97.4%	97.8%	100%	**97.5%**	-	97.6%	100%	98.5%	100%	**98.3%**	-	97.6%
Single-Unit Trucks	30	57	0	0	**87**	-	0	0	0	0	**0**	-	0	58	8	0	**66**	-	9	0	21	0	**30**	-	183
% Single-Unit Trucks	1.6%	1.4%	0%	0%	**1.5%**	-	0%	0%	0%	0%	**0%**	-	0%	1.3%	1.3%	0%	**1.3%**	-	1.4%	0%	1.1%	0%	**1.2%**	-	1.3%
Articulated Trucks	8	18	0	0	**26**	-	0	0	0	0	**0**	-	0	22	0	0	**22**	-	1	0	5	0	**6**	-	54
% Articulated Trucks	0.4%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.4%**	-	0.2%	0%	0.3%	0%	**0.2%**	-	0.4%
Buses	5	22	0	0	**27**	-	0	0	0	0	**0**	-	0	27	5	0	**32**	-	3	0	2	0	**5**	-	64
% Buses	0.3%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0.8%	0%	**0.6%**	-	0.5%	0%	0.1%	0%	**0.2%**	-	0.5%

Leg	Washington Street (Route 37)						Driveway						Washington Street (Route 37)						South Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	37	-	-	-	-	-	19	-	-	-	-	-	18	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	97.4%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	2.6%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (15) Washington @ South TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065033, Location: 42.175195, -71.013042

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Driveway						Washington Street (Route 37)						South Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	63	76	0	0	**139**	0	0	0	0	0	**0**	0	0	152	23	1	**176**	0	25	0	71	0	**96**	0	**411**
8:00AM	59	87	0	0	**146**	0	1	0	0	0	**1**	0	0	169	36	0	**205**	0	15	0	39	0	**54**	0	**406**
8:15AM	53	63	0	0	**116**	0	0	0	0	0	**0**	1	0	152	37	0	**189**	1	23	0	50	0	**73**	0	**378**
8:30AM	54	82	0	0	**136**	0	0	0	0	0	**0**	1	0	144	22	0	**166**	0	26	0	65	0	**91**	1	**393**
Total	229	308	0	0	**537**	0	1	0	0	0	**1**	2	0	617	118	1	**736**	1	89	0	225	0	**314**	1	**1588**
% Approach	42.6%	57.4%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	0%	83.8%	16.0%	0.1%	**-**	-	28.3%	0%	71.7%	0%	**-**	-	-
% Total	14.4%	19.4%	0%	0%	**33.8%**	-	0.1%	0%	0%	0%	**0.1%**	-	0%	38.9%	7.4%	0.1%	**46.3%**	-	5.6%	0%	14.2%	0%	**19.8%**	-	-
PHF	0.909	0.882	-	-	**0.918**	-	0.250	-	-	-	**0.250**	-	-	0.913	0.797	0.250	**0.898**	-	0.856	-	0.792	-	**0.818**	-	0.968
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	226	291	0	0	**517**	-	1	0	0	0	**1**	-	0	595	117	1	**713**	-	88	0	219	0	**307**	-	1538
% Lights	98.7%	94.5%	0%	0%	**96.3%**	-	100%	0%	0%	0%	**100%**	-	0%	96.4%	99.2%	100%	**96.9%**	-	98.9%	0%	97.3%	0%	**97.8%**	-	96.9%
Single-Unit Trucks	2	8	0	0	**10**	-	0	0	0	0	**0**	-	0	14	0	0	**14**	-	1	0	4	0	**5**	-	29
% Single-Unit Trucks	0.9%	2.6%	0%	0%	**1.9%**	-	0%	0%	0%	0%	**0%**	-	0%	2.3%	0%	0%	**1.9%**	-	1.1%	0%	1.8%	0%	**1.6%**	-	1.8%
Articulated Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	2	0	**2**	-	10
% Articulated Trucks	0%	1.0%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.7%**	-	0%	0%	0.9%	0%	**0.6%**	-	0.6%
Buses	1	5	0	0	**6**	-	0	0	0	0	**0**	-	0	3	1	0	**4**	-	0	0	0	0	**0**	-	10
% Buses	0.4%	1.6%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0.8%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.6%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (15) Washington @ South TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4PM - 5 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065033, Location: 42.175195, -71.013042

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						South Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:00PM	73	185	0	0	**258**	0	0	0	0	0	**0**	0	0	83	11	0	**94**	1	23	0	61	0	**84**	5	**436**
4:15PM	62	153	0	0	**215**	0	0	0	0	0	**0**	0	0	105	12	0	**117**	1	22	0	68	0	**90**	1	**422**
4:30PM	66	164	0	0	**230**	0	0	0	0	0	**0**	0	1	101	11	0	**113**	0	15	1	57	0	**73**	1	**416**
4:45PM	64	165	0	0	**229**	0	0	0	0	0	**0**	0	0	122	22	0	**144**	2	25	0	63	0	**88**	0	**461**
Total	265	667	0	0	**932**	0	0	0	0	0	**0**	0	1	411	56	0	**468**	4	85	1	249	0	**335**	7	**1735**
% Approach	28.4%	71.6%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.2%	87.8%	12.0%	0%	**-**	-	25.4%	0.3%	74.3%	0%	**-**	-	-
% Total	15.3%	38.4%	0%	0%	**53.7%**	-	0%	0%	0%	0%	**0%**	-	0.1%	23.7%	3.2%	0%	**27.0%**	-	4.9%	0.1%	14.4%	0%	**19.3%**	-	-
PHF	0.908	0.901	-	-	**0.903**	-	-	-	-	-	**-**	-	0.250	0.842	0.636	-	**0.813**	-	0.850	0.250	0.915	-	**0.931**	-	0.941
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Lights	259	652	0	0	**911**	-	0	0	0	0	**0**	-	1	407	56	0	**464**	-	83	1	249	0	**333**	-	1708
% Lights	97.7%	97.8%	0%	0%	**97.7%**	-	0%	0%	0%	0%	**-**	-	100%	99.0%	100%	0%	**99.1%**	-	97.6%	100%	100%	0%	**99.4%**	-	98.4%
Single-Unit Trucks	6	10	0	0	**16**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2	0	0	0	**2**	-	18
% Single-Unit Trucks	2.3%	1.5%	0%	0%	**1.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	2.4%	0%	0%	0%	**0.6%**	-	1.0%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	6
% Buses	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.7%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (15) Washington @ South TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065033, Location: 42.175195, -71.013042

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						South Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	36	133	0	0	**169**	0	0	0	0	0	**0**	3	0	143	9	0	**152**	3	16	0	56	0	**72**	0	**393**
12:30PM	60	129	0	0	**189**	0	0	0	0	0	**0**	4	0	143	24	0	**167**	0	19	0	44	0	**63**	0	**419**
12:45PM	50	121	0	0	**171**	0	0	0	0	0	**0**	1	0	118	18	0	**136**	0	11	0	51	0	**62**	0	**369**
1:00PM	52	151	0	0	**203**	0	0	0	0	0	**0**	1	0	119	20	0	**139**	0	15	0	49	0	**64**	1	**406**
Total	198	534	0	0	**732**	0	0	0	0	0	**0**	9	0	523	71	0	**594**	3	61	0	200	0	**261**	1	**1587**
% Approach	27.0%	73.0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	88.0%	12.0%	0%	**-**	-	23.4%	0%	76.6%	0%	**-**	-	**-**
% Total	12.5%	33.6%	0%	0%	**46.1%**	-	0%	0%	0%	0%	**0%**	-	0%	33.0%	4.5%	0%	**37.4%**	-	3.8%	0%	12.6%	0%	**16.4%**	-	**-**
PHF	0.825	0.884	-	-	**0.901**	-	-	-	-	-	**-**	-	-	0.911	0.740	-	**0.886**	-	0.803	-	0.893	-	**0.906**	-	0.946
Motorcycles	0	7	0	0	**7**	-	0	0	0	0	**0**	-	0	2	1	0	**3**	-	2	0	1	0	**3**	-	13
% Motorcycles	0%	1.3%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	1.4%	0%	**0.5%**	-	3.3%	0%	0.5%	0%	**1.1%**	-	0.8%
Lights	195	518	0	0	**713**	-	0	0	0	0	**0**	-	0	512	69	0	**581**	-	58	0	196	0	**254**	-	1548
% Lights	98.5%	97.0%	0%	0%	**97.4%**	-	0%	0%	0%	0%	**-**	-	0%	97.9%	97.2%	0%	**97.8%**	-	95.1%	0%	98.0%	0%	**97.3%**	-	97.5%
Single-Unit Trucks	2	6	0	0	**8**	-	0	0	0	0	**0**	-	0	6	1	0	**7**	-	1	0	3	0	**4**	-	19
% Single-Unit Trucks	1.0%	1.1%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**-**	-	0%	1.1%	1.4%	0%	**1.2%**	-	1.6%	0%	1.5%	0%	**1.5%**	-	1.2%
Articulated Trucks	1	2	0	0	**3**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0.5%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Buses	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	8	-	-	-	-	-	3	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	88.9%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	11.1%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (15) Washington @ South TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065033, Location: 42.175195, -71.013042

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						South Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	52	151	0	0	**203**	0	0	0	0	0	**0**	1	0	119	20	0	**139**	0	15	0	49	0	**64**	1	**406**
1:15PM	54	110	0	0	**164**	0	0	0	0	0	**0**	6	0	122	13	0	**135**	1	9	0	50	0	**59**	0	**358**
1:30PM	63	119	0	0	**182**	0	0	0	0	0	**0**	1	0	112	16	0	**128**	0	18	0	40	0	**58**	0	**368**
1:45PM	35	115	1	0	**151**	1	0	0	0	0	**0**	2	0	128	19	0	**147**	0	24	0	49	0	**73**	2	**371**
Total	204	495	1	0	**700**	1	0	0	0	0	**0**	10	0	481	68	0	**549**	1	66	0	188	0	**254**	3	**1503**
% Approach	29.1%	70.7%	0.1%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	87.6%	12.4%	0%	**-**	-	26.0%	0%	74.0%	0%	**-**	-	**-**
% Total	13.6%	32.9%	0.1%	0%	**46.6%**	-	0%	0%	0%	0%	**0%**	-	0%	32.0%	4.5%	0%	**36.5%**	-	4.4%	0%	12.5%	0%	**16.9%**	-	**-**
PHF	0.810	0.820	0.250	-	**0.862**	-	-	-	-	-	**-**	-	-	0.939	0.850	-	**0.934**	-	0.688	-	0.940	-	**0.870**	-	0.925
Motorcycles	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	1	0	0	0	**1**	-	8
% Motorcycles	0%	0.6%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0%	0.8%	0%	0%	**0.7%**	-	1.5%	0%	0%	0%	**0.4%**	-	0.5%
Lights	201	483	1	0	**685**	-	0	0	0	0	**0**	-	0	474	68	0	**542**	-	63	0	188	0	**251**	-	1478
% Lights	98.5%	97.6%	100%	0%	**97.9%**	-	0%	0%	0%	0%	**-**	-	0%	98.5%	100%	0%	**98.7%**	-	95.5%	0%	100%	0%	**98.8%**	-	98.3%
Single-Unit Trucks	1	5	0	0	**6**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	8
% Single-Unit Trucks	0.5%	1.0%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	2	3	0	0	**5**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	6
% Articulated Trucks	1.0%	0.6%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	1.5%	0%	0%	0%	**0.4%**	-	0.4%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1	0	0	0	**1**	-	3
% Buses	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.2%**	-	1.5%	0%	0%	0%	**0.4%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	-	1	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	90.0%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	10.0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (16) Washington @ Roosevelt TMC - TMC

Thu May 4, 2023
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065034, Location: 42.169817, -71.00819

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Driveway						Washington Street (Route 37)						Roosevelt Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-05-04 6:00AM	0	31	0	0	**31**	0	0	0	0	0	**0**	0	0	145	0	0	**145**	0	1	0	0	0	**1**	0	**177**
6:15AM	0	42	0	0	**42**	0	0	0	0	0	**0**	0	0	157	0	0	**157**	0	1	0	1	0	**2**	0	**201**
6:30AM	0	50	0	0	**50**	0	0	0	0	0	**0**	0	0	176	0	0	**176**	0	1	0	0	0	**1**	0	**227**
6:45AM	1	43	0	0	**44**	0	0	0	1	0	**1**	0	0	194	1	0	**195**	0	0	0	3	0	**3**	0	**243**
Hourly Total	1	166	0	0	**167**	0	0	0	1	0	**1**	0	0	672	1	0	**673**	0	3	0	4	0	**7**	0	**848**
7:00AM	0	54	0	0	**54**	1	0	0	0	0	**0**	1	0	189	2	0	**191**	0	2	0	0	0	**2**	0	**247**
7:15AM	4	77	0	0	**81**	0	0	0	0	0	**0**	0	0	172	0	0	**172**	0	1	0	0	0	**1**	0	**254**
7:30AM	0	57	0	0	**57**	0	0	0	0	0	**0**	0	0	142	1	0	**143**	0	0	0	3	0	**3**	0	**203**
7:45AM	1	80	0	0	**81**	0	0	0	0	0	**0**	1	0	177	4	0	**181**	0	1	0	1	0	**2**	0	**264**
Hourly Total	5	268	0	0	**273**	1	0	0	0	0	**0**	2	0	680	7	0	**687**	0	4	0	4	0	**8**	0	**968**
8:00AM	1	81	0	0	**82**	0	0	0	0	0	**0**	0	0	175	0	0	**175**	0	0	0	4	0	**4**	1	**261**
8:15AM	0	71	0	0	**71**	1	0	0	0	0	**0**	1	0	168	2	0	**170**	0	3	0	3	0	**6**	1	**247**
8:30AM	1	87	0	0	**88**	1	0	0	0	0	**0**	0	0	145	0	0	**145**	0	0	0	0	0	**0**	0	**233**
8:45AM	0	66	0	0	**66**	0	0	0	0	0	**0**	2	0	147	0	0	**147**	0	0	0	0	0	**0**	0	**213**
Hourly Total	2	305	0	0	**307**	2	0	0	0	0	**0**	3	0	635	2	0	**637**	0	3	0	7	0	**10**	2	**954**
3:00PM	2	154	0	0	**156**	0	0	0	0	0	**0**	3	0	92	1	0	**93**	0	4	0	1	0	**5**	1	**254**
3:15PM	2	144	0	0	**146**	0	0	0	0	0	**0**	2	0	103	1	0	**104**	0	0	0	3	0	**3**	3	**253**
3:30PM	1	166	0	0	**167**	2	0	0	0	0	**0**	6	0	127	1	0	**128**	0	0	0	1	0	**1**	4	**296**
3:45PM	1	152	1	0	**154**	2	0	0	0	0	**0**	4	0	100	0	0	**100**	0	0	0	0	0	**0**	4	**254**
Hourly Total	6	616	1	0	**623**	4	0	0	0	0	**0**	15	0	422	3	0	**425**	0	4	0	5	0	**9**	12	**1057**
4:00PM	1	195	0	0	**196**	0	0	0	0	0	**0**	1	0	92	1	0	**93**	0	5	0	0	0	**5**	7	**294**
4:15PM	1	170	0	0	**171**	9	0	0	0	0	**0**	7	0	106	2	0	**108**	0	1	0	0	0	**1**	9	**280**
4:30PM	4	156	0	0	**160**	2	0	0	0	0	**0**	4	0	108	2	0	**110**	0	1	0	0	0	**1**	9	**271**
4:45PM	1	171	0	0	**172**	3	0	0	0	0	**0**	3	0	117	0	0	**117**	0	1	0	0	0	**1**	8	**290**
Hourly Total	7	692	0	0	**699**	14	0	0	0	0	**0**	15	0	423	5	0	**428**	0	8	0	0	0	**8**	33	**1135**
5:00PM	3	165	0	0	**168**	4	0	0	0	0	**0**	4	0	120	1	0	**121**	0	1	0	2	0	**3**	8	**292**
5:15PM	1	186	0	0	**187**	0	0	0	0	0	**0**	2	0	117	0	0	**117**	0	2	0	0	0	**2**	1	**306**
5:30PM	0	162	0	0	**162**	2	0	0	1	0	**1**	1	0	120	1	0	**121**	0	1	0	1	0	**2**	5	**286**
5:45PM	1	147	0	0	**148**	4	0	0	0	0	**0**	5	0	117	0	0	**117**	0	1	0	0	0	**1**	1	**266**
Hourly Total	5	660	0	0	**665**	10	0	0	1	0	**1**	12	0	474	2	0	**476**	0	5	0	3	0	**8**	15	**1150**
2023-05-06 11:00AM	0	107	0	0	**107**	0	0	0	0	0	**0**	4	0	110	0	0	**110**	0	1	0	0	0	**1**	2	**218**
11:15AM	1	108	0	0	**109**	1	0	0	0	0	**0**	1	0	120	1	0	**121**	0	0	0	3	0	**3**	3	**233**
11:30AM	2	120	0	0	**122**	0	0	0	0	0	**0**	0	0	132	2	0	**134**	0	2	0	1	0	**3**	2	**259**
11:45AM	1	123	0	0	**124**	0	0	0	0	0	**0**	3	0	118	0	0	**118**	0	1	0	1	0	**2**	2	**244**
Hourly Total	4	458	0	0	**462**	1	0	0	0	0	**0**	8	0	480	3	0	**483**	0	4	0	5	0	**9**	9	**954**
12:00PM	1	125	0	0	**126**	1	0	0	0	0	**0**	2	0	115	0	0	**115**	0	0	0	1	0	**1**	5	**242**
12:15PM	0	130	0	0	**130**	0	0	0	0	0	**0**	1	0	151	1	0	**152**	1	2	0	0	0	**2**	2	**284**
12:30PM	0	142	0	0	**142**	4	0	0	0	0	**0**	4	0	139	1	0	**140**	0	1	0	1	0	**2**	4	**284**
12:45PM	2	129	0	0	**131**	0	0	0	0	0	**0**	0	0	138	2	0	**140**	0	0	0	1	0	**1**	2	**272**
Hourly Total	3	526	0	0	**529**	5	0	0	0	0	**0**	7	0	543	4	0	**547**	1	3	0	3	0	**6**	13	**1082**
1:00PM	1	145	0	0	**146**	3	0	0	0	0	**0**	3	0	121	1	0	**122**	0	2	0	1	0	**3**	1	**271**
1:15PM	3	111	0	0	**114**	0	0	0	0	0	**0**	6	0	129	2	0	**131**	0	0	0	2	0	**2**	3	**247**
1:30PM	1	133	0	0	**134**	0	0	0	0	0	**0**	3	0	121	2	0	**123**	0	2	0	0	0	**2**	6	**259**
1:45PM	3	131	0	0	**134**	3	0	0	0	0	**0**	3	0	136	1	0	**137**	0	1	0	3	0	**4**	2	**275**
Hourly Total	8	520	0	0	**528**	6	0	0	0	0	**0**	15	0	507	6	0	**513**	0	5	0	6	0	**11**	12	**1052**
Total	41	4211	1	0	**4253**	43	0	0	2	0	**2**	77	0	4836	33	0	**4869**	1	39	0	37	0	**76**	96	**9200**
% Approach	1.0%	99.0%	0%	0%	**-**	-	0%	0%	100%	0%	**-**	-	0%	99.3%	0.7%	0%	**-**	-	51.3%	0%	48.7%	0%	**-**	-	-
% Total	0.4%	45.8%	0%	0%	**46.2%**	-	0%	0%	0%	0%	**0%**	-	0%	52.6%	0.4%	0%	**52.9%**	-	0.4%	0%	0.4%	0%	**0.8%**	-	-
Motorcycles	0	14	0	0	**14**	-	0	0	0	0	**0**	-	0	13	0	0	**13**	-	0	0	0	0	**0**	-	27
% Motorcycles	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Lights	39	4088	1	0	**4128**	-	0	0	2	0	**2**	-	0	4707	33	0	**4740**	-	37	0	34	0	**71**	-	8941
% Lights	95.1%	97.1%	100%	0%	**97.1%**	-	0%	0%	100%	0%	**100%**	-	0%	97.3%	100%	0%	**97.4%**	-	94.9%	0%	91.9%	0%	**93.4%**	-	97.2%

Leg Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						Roosevelt Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Single-Unit Trucks	1	68	0	0	**69**	-	0	0	0	0	**0**	-	0	59	0	0	**59**	-	2	0	0	0	**2**	-	130
% Single-Unit Trucks	2.4%	1.6%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.2%**	-	5.1%	0%	0%	0%	**2.6%**	-	1.4%
Articulated Trucks	0	15	0	0	**15**	-	0	0	0	0	**0**	-	0	25	0	0	**25**	-	0	0	0	0	**0**	-	40
% Articulated Trucks	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Buses	1	24	0	0	**25**	-	0	0	0	0	**0**	-	0	29	0	0	**29**	-	0	0	1	0	**1**	-	55
% Buses	2.4%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	2.7%	0%	**1.3%**	-	0.6%
Bicycles on Road	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	2	0	**2**	-	7
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	5.4%	0%	**2.6%**	-	0.1%
Pedestrians	-	-	-	-	-	38	-	-	-	-	-	71	-	-	-	-	-	1	-	-	-	-	-	82	
% Pedestrians	-	-	-	-	-	88.4%	-	-	-	-	-	92.2%	-	-	-	-	-	100%	-	-	-	-	-	85.4%	-
Bicycles on Crosswalk	-	-	-	-	-	5	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	14	
% Bicycles on Crosswalk	-	-	-	-	-	11.6%	-	-	-	-	-	7.8%	-	-	-	-	-	0%	-	-	-	-	-	14.6%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (16) Washington @ Roosevelt TMC - TMC

Thu May 4, 2023
AM Peak (May 04 2023 7:45AM - 8:45 AM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065034, Location: 42.169817, -71.00819

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						Roosevelt Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 7:45AM	1	80	0	0	**81**	0	0	0	0	0	**0**	1	0	177	4	0	**181**	0	1	0	1	0	**2**	0	**264**
8:00AM	1	81	0	0	**82**	0	0	0	0	0	**0**	0	0	175	0	0	**175**	0	0	0	4	0	**4**	1	**261**
8:15AM	0	71	0	0	**71**	1	0	0	0	0	**0**	1	0	168	2	0	**170**	0	3	0	3	0	**6**	1	**247**
8:30AM	1	87	0	0	**88**	1	0	0	0	0	**0**	0	0	145	0	0	**145**	0	0	0	0	0	**0**	0	**233**
Total	3	319	0	0	**322**	2	0	0	0	0	**0**	2	0	665	6	0	**671**	0	4	0	8	0	**12**	2	**1005**
% Approach	0.9%	99.1%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	99.1%	0.9%	0%	**-**	-	33.3%	0%	66.7%	0%	**-**	-	**-**
% Total	0.3%	31.7%	0%	0%	**32.0%**	-	0%	0%	0%	0%	**0%**	-	0%	66.2%	0.6%	0%	**66.8%**	-	0.4%	0%	0.8%	0%	**1.2%**	-	**-**
PHF	0.750	0.914	-	-	**0.912**	-	-	-	-	-	**-**	-	-	0.939	0.375	-	**0.927**	-	0.333	-	0.500	-	**0.500**	-	0.954
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	3	302	0	0	**305**	-	0	0	0	0	**0**	-	0	638	6	0	**644**	-	4	0	8	0	**12**	-	961
% Lights	100%	94.7%	0%	0%	**94.7%**	-	0%	0%	0%	0%	**-**	-	0%	95.9%	100%	0%	**96.0%**	-	100%	0%	100%	0%	**100%**	-	95.6%
Single-Unit Trucks	0	7	0	0	**7**	-	0	0	0	0	**0**	-	0	14	0	0	**14**	-	0	0	0	0	**0**	-	21
% Single-Unit Trucks	0%	2.2%	0%	0%	**2.2%**	-	0%	0%	0%	0%	**-**	-	0%	2.1%	0%	0%	**2.1%**	-	0%	0%	0%	0%	**0%**	-	2.1%
Articulated Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	9	0	0	**9**	-	0	0	0	0	**0**	-	12
% Articulated Trucks	0%	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	0%	1.4%	0%	0%	**1.3%**	-	0%	0%	0%	0%	**0%**	-	1.2%
Buses	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	10
% Buses	0%	1.9%	0%	0%	**1.9%**	-	0%	0%	0%	0%	**-**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	1.0%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (16) Washington @ Roosevelt TMC - TMC

Thu May 4, 2023
PM Peak (May 04 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065034, Location: 42.169817, -71.00819

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						Roosevelt Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-04 4:45PM	1	171	0	0	**172**	3	0	0	0	0	**0**	3	0	117	0	0	**117**	0	1	0	0	0	**1**	8	**290**
5:00PM	3	165	0	0	**168**	4	0	0	0	0	**0**	4	0	120	1	0	**121**	0	1	0	2	0	**3**	8	**292**
5:15PM	1	186	0	0	**187**	0	0	0	0	0	**0**	2	0	117	0	0	**117**	0	2	0	0	0	**2**	1	**306**
5:30PM	0	162	0	0	**162**	2	0	0	1	0	**1**	1	0	120	1	0	**121**	0	1	0	1	0	**2**	5	**286**
Total	5	684	0	0	**689**	9	0	0	1	0	**1**	10	0	474	2	0	**476**	0	5	0	3	0	**8**	22	**1174**
% Approach	0.7%	99.3%	0%	0%	**-**	-	0%	0%	100%	0%	**-**	-	0%	99.6%	0.4%	0%	**-**	-	62.5%	0%	37.5%	0%	**-**	-	**-**
% Total	0.4%	58.3%	0%	0%	**58.7%**	-	0%	0%	0.1%	0%	**0.1%**	-	0%	40.4%	0.2%	0%	**40.5%**	-	0.4%	0%	0.3%	0%	**0.7%**	-	**-**
PHF	0.417	0.919	-	-	**0.921**	-	-	-	0.250	-	**0.250**	-	-	0.988	0.500	-	**0.983**	-	0.625	-	0.375	-	**0.667**	-	0.959
Motorcycles	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Motorcycles	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Lights	4	666	0	0	**670**	-	0	0	1	0	**1**	-	0	465	2	0	**467**	-	4	0	3	0	**7**	-	1145
% Lights	80.0%	97.4%	0%	0%	**97.2%**	-	0%	0%	100%	0%	**100%**	-	0%	98.1%	100%	0%	**98.1%**	-	80.0%	0%	100%	0%	**87.5%**	-	97.5%
Single-Unit Trucks	1	14	0	0	**15**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	1	0	0	0	**1**	-	22
% Single-Unit Trucks	20.0%	2.0%	0%	0%	**2.2%**	-	0%	0%	0%	0%	**0%**	-	0%	1.3%	0%	0%	**1.3%**	-	20.0%	0%	0%	0%	**12.5%**	-	1.9%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	4
% Buses	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	22	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (16) Washington @ Roosevelt TMC - TMC

Sat May 6, 2023
Midday Peak (WKND) (May 06 2023 12:15PM - 1:15 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065034, Location: 42.169817, -71.00819

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Washington Street (Route 37) Southbound						Driveway Westbound						Washington Street (Route 37) Northbound						Roosevelt Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 12:15PM	0	130	0	0	**130**	0	0	0	0	0	**0**	1	0	151	1	0	**152**	1	2	0	0	0	**2**	2	**284**
12:30PM	0	142	0	0	**142**	4	0	0	0	0	**0**	4	0	139	1	0	**140**	0	1	0	1	0	**2**	4	**284**
12:45PM	2	129	0	0	**131**	0	0	0	0	0	**0**	0	0	138	2	0	**140**	0	0	0	1	0	**1**	2	**272**
1:00PM	1	145	0	0	**146**	3	0	0	0	0	**0**	3	0	121	1	0	**122**	0	2	0	1	0	**3**	1	**271**
Total	3	546	0	0	**549**	7	0	0	0	0	**0**	8	0	549	5	0	**554**	1	5	0	3	0	**8**	9	**1111**
% Approach	0.5%	99.5%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	99.1%	0.9%	0%	**-**	-	62.5%	0%	37.5%	0%	**-**	-	-
% Total	0.3%	49.1%	0%	0%	**49.4%**	-	0%	0%	0%	0%	**0%**	-	0%	49.4%	0.5%	0%	**49.9%**	-	0.5%	0%	0.3%	0%	**0.7%**	-	-
PHF	0.375	0.941	-	-	**0.940**	-	-	-	-	-	**-**	-	-	0.904	0.625	-	**0.906**	-	0.625	-	0.750	-	**0.667**	-	0.975
Motorcycles	0	9	0	0	**9**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	13
% Motorcycles	0%	1.6%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**-**	-	0%	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	1.2%
Lights	3	523	0	0	**526**	-	0	0	0	0	**0**	-	0	535	5	0	**540**	-	5	0	3	0	**8**	-	1074
% Lights	100%	95.8%	0%	0%	**95.8%**	-	0%	0%	0%	0%	**-**	-	0%	97.4%	100%	0%	**97.5%**	-	100%	0%	100%	0%	**100%**	-	96.7%
Single-Unit Trucks	0	13	0	0	**13**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	0	0	0	0	**0**	-	19
% Single-Unit Trucks	0%	2.4%	0%	0%	**2.4%**	-	0%	0%	0%	0%	**-**	-	0%	1.1%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	1.7%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Buses	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	8	-	-	-	-	-	1	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	71.4%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	77.8%	-
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	28.6%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	22.2%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

239319 (16) Washington @ Roosevelt TMC - TMC

Sat May 6, 2023
PM Peak (WKND) (May 06 2023 1PM - 2 PM)
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1065034, Location: 42.169817, -71.00819

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Washington Street (Route 37)						Driveway						Washington Street (Route 37)						Roosevelt Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-05-06 1:00PM	1	145	0	0	**146**	3	0	0	0	0	**0**	3	0	121	1	0	**122**	0	2	0	1	0	**3**	1	**271**
1:15PM	3	111	0	0	**114**	0	0	0	0	0	**0**	6	0	129	2	0	**131**	0	0	0	2	0	**2**	3	**247**
1:30PM	1	133	0	0	**134**	0	0	0	0	0	**0**	3	0	121	2	0	**123**	0	2	0	0	0	**2**	6	**259**
1:45PM	3	131	0	0	**134**	3	0	0	0	0	**0**	3	0	136	1	0	**137**	0	1	0	3	0	**4**	2	**275**
Total	8	520	0	0	**528**	6	0	0	0	0	**0**	15	0	507	6	0	**513**	0	5	0	6	0	**11**	12	**1052**
% Approach	1.5%	98.5%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	98.8%	1.2%	0%	**-**	-	45.5%	0%	54.5%	0%	**-**	-	**-**
% Total	0.8%	49.4%	0%	0%	**50.2%**	-	0%	0%	0%	0%	**0%**	-	0%	48.2%	0.6%	0%	**48.8%**	-	0.5%	0%	0.6%	0%	**1.0%**	-	**-**
PHF	0.667	0.897	-	-	**0.904**	-	-	-	-	-	**-**	-	-	0.932	0.750	-	**0.936**	-	0.625	-	0.500	-	**0.688**	-	0.956
Motorcycles	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	0	0	0	0	**0**	-	11
% Motorcycles	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0%	1.6%	0%	0%	**1.6%**	-	0%	0%	0%	0%	**0%**	-	1.0%
Lights	8	503	0	0	**511**	-	0	0	0	0	**0**	-	0	495	6	0	**501**	-	5	0	6	0	**11**	-	1023
% Lights	100%	96.7%	0%	0%	**96.8%**	-	0%	0%	0%	0%	**-**	-	0%	97.6%	100%	0%	**97.7%**	-	100%	0%	100%	0%	**100%**	-	97.2%
Single-Unit Trucks	0	12	0	0	**12**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	15
% Single-Unit Trucks	0%	2.3%	0%	0%	**2.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	1.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Buses	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	15	-	-	-	-	-	0	-	-	-	-	-	12	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Part 2: Automatic Traffic Recorder Counts

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. INB

Station #: 230200000087
Site ID: 000000000101
Location: Granite St. NB, north of Wood Rd.
Direction: NORTH

File: D0501004.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		27	25	18	33	26			26	103
02:00		12	11	12	11	12			12	46
03:00		16	12	6	7	10			10	41
04:00		19	15	26	17	19			19	77
05:00		35	40	39	33	37			37	147
06:00		450	350	343	282	356			356	1425
07:00		593	360	332	282	392			392	1567
08:00		867	842	763	430	726			726	2902
09:00		850	881	795	448	744			744	2974
10:00		500	399	431		443			443	1330
11:00	269	302	292	314		294			294	1177
12:00	332	306	330	315		321			321	1283
13:00	492	416	364	404		419			419	1676
14:00	413	414	377	510		428			428	1714
15:00	421	470	415	529		459			459	1835
16:00	390	512	451	520		468			468	1873
17:00	531	492	576	506		526			526	2105
18:00	566	609	636	630		610			610	2441
19:00	412	390	471	398		418			418	1671
20:00	269	309	329	307		304			304	1214
21:00	244	245	246	256		248			248	991
22:00	146	142	156	178		156			156	622
23:00	78	89	94	92		88			88	353
24:00	39	45	42	50		44			44	176
TOTALS	4602	8110	7714	7774	1543	7548			7548	29743
% AVG WKDY	61.0	107.4	102.2	103.0	20.4					
% AVG WEEK	61.0	107.4	102.2	103.0	20.4					
AM Times	12:00	08:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	332	867	881	795	448	744			744	
PM Times	18:00	18:00	18:00	18:00		18:00			18:00	
PM Peaks	566	609	636	630		610			610	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 1SB

Station #: 230200000025
Site ID: 000000000102
Location: Granite St. SB, north of Wood Rd.
Direction: SOUTH

File: D0501005.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		26	31	32	30	30			30	119
02:00		14	21	12	9	14			14	56
03:00		12	8	8	19	12			12	47
04:00		15	22	22	27	22			22	86
05:00		46	39	39	27	38			38	151
06:00		107	104	107	101	105			105	419
07:00		222	228	237	208	224			224	895
08:00		369	364	377	309	355			355	1419
09:00		555	559	589	489	548			548	2192
10:00		349	405	388	340	370			370	1482
11:00	331	309	334	378		338			338	1352
12:00	377	428	422	361		397			397	1588
13:00	407	475	396	469		437			437	1747
14:00	449	692	462	477		520			520	2080
15:00	561	734	590	685		642			642	2570
16:00	819	868	930	933		888			888	3550
17:00	1039	929	1079	1002		1012			1012	4049
18:00	827	1068	1096	860		963			963	3851
19:00	446	712	619	519		574			574	2296
20:00	275	277	271	288		278			278	1111
21:00	180	165	168	240		188			188	753
22:00	96	144	113	128		120			120	481
23:00	64	68	77	86		74			74	295
24:00	55	53	63	54		56			56	225
TOTALS	5926	8637	8401	8291	1559	8205			8205	32814
% AVG WKDY	72.2	105.3	102.4	101.0	19.0					
% AVG WEEK	72.2	105.3	102.4	101.0	19.0					
AM Times	12:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	377	555	559	589	489	548			548	
PM Times	17:00	18:00	18:00	17:00		17:00			17:00	
PM Peaks	1039	1068	1096	1002		1012			1012	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000058 STA. 2 EB File: D0501007.prn
Site ID: 000000000203 City: Braintree
Location: Wood St. EB, west of Granite St. County: volume
Direction: EAST

TIME	MON 1	TUE 2	WED 3	THU	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		18	21			20			20	39
02:00		11	12			12			12	23
03:00		14	13			14			14	27
04:00		6	11			8			8	17
05:00		17	18			18			18	35
06:00		33	42			38			38	75
07:00		107	95			101			101	202
08:00		143	152			148			148	295
09:00		150	151			150			150	301
10:00		188	175			182			182	363
11:00	240	206	194			213			213	640
12:00	298	252	252			267			267	802
13:00	314	268	270			284			284	852
14:00	263	206	286			252			252	755
15:00	292	271	291			285			285	854
16:00	252	287	284			274			274	823
17:00	326	279	313			306			306	918
18:00	317	332	353			334			334	1002
19:00	215	247	227			230			230	689
20:00	165	182	165			171			171	512
21:00	107	116	96			106			106	319
22:00	99	93	82			91			91	274
23:00	54	43	38			45			45	135
24:00	12	18	6			12			12	36
TOTALS	2954	3487	3547			3561			3561	9988
% AVG WKDY	83.0	97.9	99.6							
% AVG WEEK	83.0	97.9	99.6							
AM Times	12:00	12:00	12:00			12:00			12:00	
AM Peaks	298	252	252			267			267	
PM Times	17:00	18:00	18:00			18:00			18:00	
PM Peaks	326	332	353			334			334	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000139 STA. 2 WB File: D0501002.prn
Site ID: 000000000204 City: Braintree
Location: Wood St. WB, west of Granite St. County: volume
Direction: WEST

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		9	7	14	10	10			10	40
02:00		10	17	10	13	12			12	50
03:00		12	5	8	8	8			8	33
04:00		5	10	3	2	5			5	20
05:00		66	60	61	57	61			61	244
06:00		113	110	112	93	107			107	428
07:00		171	166	166	159	166			166	662
08:00		189	217	197	215	204			204	818
09:00		331	368	365	328	348			348	1392
10:00		302	262	301	233	274			274	1098
11:00	262	217	224	252		239			239	955
12:00	276	236	259	267		260			260	1038
13:00	257	246	247	252		250			250	1002
14:00	260	229	277	253		255			255	1019
15:00	226	241	224	210		225			225	901
16:00	208	209	215	251		221			221	883
17:00	204	212	220	230		216			216	866
18:00	208	192	203	224		207			207	827
19:00	137	158	156	173		156			156	624
20:00	110	109	106	119		111			111	444
21:00	86	80	80	109		89			89	355
22:00	51	41	35	35		40			40	162
23:00	25	29	20	29		26			26	103
24:00	11	12	10	19		13			13	52
TOTALS	2321	3419	3498	3660	1118	3503			3503	14016
% AVG WKDY	66.3	97.6	99.9	104.5	31.9					
% AVG WEEK	66.3	97.6	99.9	104.5	31.9					
AM Times	12:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	276	331	368	365	328	348			348	
PM Times	14:00	13:00	14:00	14:00		14:00			14:00	
PM Peaks	260	246	277	253		255			255	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 3 EB

Station #: 230200000144
Site ID: 000000000303
Location: Rockdale St. EB, east of Granite St.
Direction: EAST

File: D0501008.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		7	6	3	6	6			6	22
02:00		6	4	3	4	4			4	17
03:00		3	3	2	7	4			4	15
04:00		2	1	6	2	3			3	11
05:00		4	6	5	2	4			4	17
06:00		10	13	13	13	12			12	49
07:00		55	51	65	37	52			52	208
08:00		170	164	171	135	160			160	640
09:00		426	468	467	300	415			415	1661
10:00		297	267	262		275			275	826
11:00	109	148	116	119		123			123	492
12:00	104	103	86	100		98			98	393
13:00	128	127	118	150		131			131	523
14:00	115	119	111	141		122			122	486
15:00	63	86	82	70		75			75	301
16:00	58	53	42	60		53			53	213
17:00	58	62	82	67		67			67	269
18:00	77	60	68	63		67			67	268
19:00	25	31	33	27		29			29	116
20:00	20	19	25	19		21			21	83
21:00	18	22	14	15		17			17	69
22:00	11	16	14	9		12			12	50
23:00	7	6	7	8		7			7	28
24:00	10	7	7	5		7			7	29
TOTALS	803	1839	1788	1850	506	1764			1764	6786
% AVG WKDY	45.5	104.3	101.4	104.9	28.7					
% AVG WEEK	45.5	104.3	101.4	104.9	28.7					
AM Times	11:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	109	426	468	467	300	415			415	
PM Times	13:00	13:00	13:00	13:00		13:00			13:00	
PM Peaks	128	127	118	150		131			131	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 3 WB

Station #: 230200000074
Site ID: 000000000304
Location: Rockdale St. WB, east of Granite St.
Direction: WEST

File: D0501009.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		7	8	4	6	6			6	25
02:00		6	4	3	6	5			5	19
03:00		4	2	3	11	5			5	20
04:00		1	0	4	2	2			2	7
05:00		2	5	3	1	3			3	11
06:00		6	7	13	10	9			9	36
07:00		25	25	23	21	24			24	94
08:00		44	41	38	38	40			40	161
09:00		62	75	78	73	72			72	288
10:00		78	73	99		83			83	250
11:00	59	67	60	82		67			67	268
12:00	94	120	99	106		105			105	419
13:00	135	144	151	135		141			141	565
14:00	122	133	110	156		130			130	521
15:00	107	141	109	121		120			120	478
16:00	145	155	138	170		152			152	608
17:00	239	270	287	281		269			269	1077
18:00	333	372	377	337		355			355	1419
19:00	97	100	127	126		112			112	450
20:00	46	55	50	43		48			48	194
21:00	22	31	21	17		23			23	91
22:00	13	13	24	17		17			17	67
23:00	17	21	23	21		20			20	82
24:00	10	7	7	5		7			7	29
TOTALS	1439	1864	1823	1885	168	1815			1815	7179
% AVG WKDY	79.3	102.7	100.4	103.9	9.3					
% AVG WEEK	79.3	102.7	100.4	103.9	9.3					
AM Times	12:00	12:00	12:00	12:00	09:00	12:00			12:00	
AM Peaks	94	120	99	106	73	105			105	
PM Times	18:00	18:00	18:00	18:00		18:00			18:00	
PM Peaks	333	372	377	337		355			355	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH

STA 4 NB
LN. 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		30	36	34	38	34			34	138
02:00		31	31	20	19	25			25	101
03:00		17	15	18	18	17			17	68
04:00		33	49	38	41	40			40	161
05:00		101	100	102	90	98			98	393
06:00		307	280	285	275	287			287	1147
07:00		558	525	535	452	518			518	2070
08:00		702	752	721	587	690			690	2762
09:00		666	689	665	481	625			625	2501
10:00		494	488	462	449	473			473	1893
11:00		438	428	471		446			446	1337
12:00	449	458	512	487		476			476	1906
13:00	508	514	463	505		498			498	1990
14:00	503	490	486	502		495			495	1981
15:00	455	461	486	531		483			483	1933
16:00	473	526	451	473		481			481	1923
17:00	489	484	505	523		500			500	2001
18:00	487	482	528	508		501			501	2005
19:00	412	399	460	442		428			428	1713
20:00	310	306	313	352		320			320	1281
21:00	230	210	218	246		226			226	904
22:00	148	168	146	182		161			161	644
23:00	127	117	121	116		120			120	481
24:00	67	69	82	88		76			76	306
TOTALS	4658	8061	8164	8306	2450	8018			8018	31639
% AVG WKDY	58.1	100.5	101.8	103.6	30.6					
% AVG WEEK	58.1	100.5	101.8	103.6	30.6					
AM Times	12:00	08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks	449	702	752	721	587	690			690	
PM Times	13:00	16:00	18:00	15:00		18:00			18:00	
PM Peaks	508	526	528	531		501			501	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH

STA. 4NB
LN. 2

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		27	33	26	37	31			31	123
02:00		11	13	17	23	16			16	64
03:00		27	24	23	34	27			27	108
04:00		52	37	33	39	40			40	161
05:00		80	65	81	83	77			77	309
06:00		280	258	285	228	263			263	1051
07:00		487	485	479	426	469			469	1877
08:00		661	685	685	511	636			636	2542
09:00		638	595	613	443	572			572	2289
10:00		415	390	390	357	388			388	1552
11:00		343	336	352		344			344	1031
12:00	313	352	361	321		337			337	1347
13:00	368	397	348	357		368			368	1470
14:00	368	375	388	352		371			371	1483
15:00	396	384	419	430		407			407	1629
16:00	354	384	350	353		360			360	1441
17:00	370	388	375	344		369			369	1477
18:00	352	350	377	427		376			376	1506
19:00	330	286	325	337		320			320	1278
20:00	221	223	262	236		236			236	942
21:00	156	183	189	207		184			184	735
22:00	117	142	129	135		131			131	523
23:00	88	83	109	101		95			95	381
24:00	50	62	66	98		69			69	276
TOTALS	3483	6630	6619	6682	2181	6486			6486	25595
% AVG WKDY	53.7	102.2	102.1	103.0	33.6					
% AVG WEEK	53.7	102.2	102.1	103.0	33.6					
AM Times	12:00	08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks	313	661	685	685	511	636			636	
PM Times	15:00	13:00	15:00	15:00		15:00			15:00	
PM Peaks	396	397	419	430		407			407	

Mass Highway Department

WEEKLY SUMMARY FOR ALL LANES
Starting: 5/1/2023

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL

STA. 4 SB
LN. 1

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		68	91	78	93	82			82	330
02:00		47	35	30	49	40			40	161
03:00		46	38	36	41	40			40	161
04:00		43	40	41	41	41			41	165
05:00		80	74	75	67	74			74	296
06:00		165	167	166	157	164			164	655
07:00		301	320	327	296	311			311	1244
08:00		356	374	420	388	384			384	1538
09:00		479	477	465	474	474			474	1895
10:00		456	436	414		435			435	1306
11:00		397	450	406		418			418	1253
12:00	443	523	504	483		488			488	1953
13:00	527	514	520	534		524			524	2095
14:00	515	584	518	534		538			538	2151
15:00	553	592	600	611		589			589	2356
16:00	695	678	743	688		701			701	2804
17:00	762	675	726	706		717			717	2869
18:00	672	731	695	718		704			704	2816
19:00	576	630	661	513		595			595	2380
20:00	459	462	469	445		459			459	1835
21:00	339	316	358	375		347			347	1388
22:00	248	258	249	310		266			266	1065
23:00	159	178	148	201		172			172	686
24:00	121	104	144	154		131			131	523
TOTALS	6069	8683	8837	8730	1606	8694			8694	33925
% AVG WKDY	69.8	99.9	101.6	100.4	18.5					
% AVG WEEK	69.8	99.9	101.6	100.4	18.5					
AM Times	12:00	12:00	12:00	12:00	09:00	12:00			12:00	
AM Peaks	443	523	504	483	474	488			488	
PM Times	17:00	18:00	16:00	18:00		17:00			17:00	
PM Peaks	762	731	743	718		717			717	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH

STA. 4SB
LN. 2

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		28	24	28	34	28			28	114
02:00		17	10	6	13	12			12	46
03:00		20	10	13	9	13			13	52
04:00		7	8	5	5	6			6	25
05:00		17	12	23	14	16			16	66
06:00		79	71	75	66	73			73	291
07:00		166	174	157	138	159			159	635
08:00		211	230	230	209	220			220	880
09:00		320	312	338	311	320			320	1281
10:00		259	260	266	227	253			253	1012
11:00		245	244	241		243			243	730
12:00	271	272	308	272		281			281	1123
13:00	414	366	348	317		361			361	1445
14:00	392	387	339	364		370			370	1482
15:00	406	466	479	454		451			451	1805
16:00	589	586	613	617		601			601	2405
17:00	760	567	639	705		668			668	2671
18:00	557	572	605	565		575			575	2299
19:00	385	459	479	490		453			453	1813
20:00	250	276	311	269		276			276	1106
21:00	211	204	228	243		222			222	886
22:00	119	156	131	173		145			145	579
23:00	71	89	98	104		90			90	362
24:00	49	61	51	51		53			53	212
TOTALS	4474	5830	5984	6006	1026	5889			5889	23320
% AVG WKDY	76.0	99.0	101.6	102.0	17.4					
% AVG WEEK	76.0	99.0	101.6	102.0	17.4					
AM Times	12:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	271	320	312	338	311	320			320	
PM Times	17:00	16:00	17:00	17:00		17:00			17:00	
PM Peaks	760	586	639	705		668			668	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000151
Site ID: 000000000503
Location: West St. EB, west of Route 37
Direction: EAST

STA. 5 EB

File: D0501010.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		8	4	5	12	7			7	29
02:00		7	7	3	7	6			6	24
03:00		4	6	9	2	5			5	21
04:00		7	4	5	4	5			5	20
05:00		19	12	9	7	12			12	47
06:00		54	50	55	45	51			51	204
07:00		119	119	114	102	114			114	454
08:00		224	240	220	217	225			225	901
09:00		309	269	262	227	267			267	1067
10:00		222	206	203	192	206			206	823
11:00		197	148	158		168			168	503
12:00	200	210	218	175		201			201	803
13:00	250	238	227	201		229			229	916
14:00	278	178	189	253		224			224	898
15:00	294	288	264	297		286			286	1143
16:00	286	336	290	353		316			316	1265
17:00	313	356	335	338		336			336	1342
18:00	316	303	344	310		318			318	1273
19:00	163	175	208	197		186			186	743
20:00	119	125	139	89		118			118	472
21:00	81	90	72	84		82			82	327
22:00	50	43	62	63		54			54	218
23:00	29	31	37	27		31			31	124
24:00	13	7	9	14		11			11	43
TOTALS	2392	3550	3459	3444	815	3458			3458	13660
% AVG WKDY	69.2	102.7	100.0	99.6	23.6					
% AVG WEEK	69.2	102.7	100.0	99.6	23.6					
AM Times	12:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	200	309	269	262	227	267			267	
PM Times	18:00	17:00	18:00	16:00		17:00			17:00	
PM Peaks	316	356	344	353		336			336	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 5 WB

Station #: 230200000018
Site ID: 000000000504
Location: West St. WB, west of Route 37
Direction: WEST

File: D0501011.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		4	6	10	16	9			9	36
02:00		8	5	9	5	7			7	27
03:00		2	4	4	4	4			4	14
04:00		7	4	5	6	6			6	22
05:00		16	14	6	8	11			11	44
06:00		83	78	63	72	74			74	296
07:00		133	140	149	120	136			136	542
08:00		249	243	237	212	235			235	941
09:00		285	287	325	214	278			278	1111
10:00		167	174	182	167	172			172	690
11:00		168	158	148		158			158	474
12:00	177	227	175	169		187			187	748
13:00	204	212	240	244		225			225	900
14:00	186	201	185	168		185			185	740
15:00	228	279	269	256		258			258	1032
16:00	344	311	367	326		337			337	1348
17:00	457	283	372	351		366			366	1463
18:00	269	290	337	280		294			294	1176
19:00	197	173	197	205		193			193	772
20:00	144	150	150	131		144			144	575
21:00	103	104	113	106		106			106	426
22:00	71	92	55	71		72			72	289
23:00	31	42	32	30		34			34	135
24:00	21	18	28	32		25			25	99
TOTALS	2432	3504	3633	3507	824	3516			3516	13900
% AVG WKDY	69.2	99.7	103.3	99.7	23.4					
% AVG WEEK	69.2	99.7	103.3	99.7	23.4					
AM Times	12:00	09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks	177	285	287	325	214	278			278	
PM Times	17:00	16:00	17:00	17:00		17:00			17:00	
PM Peaks	457	311	372	351		366			366	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 6 EB

Station #: 230200000067
Site ID: 000000000603
Location: Granite St. EB, west of Route 37
Direction: EAST

File: D0501012.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		7	11	10		9			9	28
02:00		8	7	9		8			8	24
03:00		7	5			6			6	12
04:00		6	8			7			7	14
05:00		9	8			8			8	17
06:00		30	33			32			32	63
07:00		109	108			108			108	217
08:00		222	227			224			224	449
09:00		274	274			274			274	548
10:00		193	166			180			180	359
11:00		183	177			180			180	360
12:00	204	182	198			195			195	584
13:00	250	195	194			213			213	639
14:00	271	217	224			237			237	712
15:00	327	343	300			323			323	970
16:00	270	333	292			298			298	895
17:00	345	341	331			339			339	1017
18:00	366	347	362			358			358	1075
19:00	237	250	283			257			257	770
20:00	176	167	213			185			185	556
21:00	101	110	125			112			112	336
22:00	83	63	70			72			72	216
23:00	37	42	47			42			42	126
24:00	20	24	18			21			21	62
TOTALS	2687	3662	3681	19		3688			3688	10049
% AVG WKDY	72.9	99.3	99.8	0.5						
% AVG WEEK	72.9	99.3	99.8	0.5						
AM Times	12:00	09:00	09:00	01:00		09:00			09:00	
AM Peaks	204	274	274	10		274			274	
PM Times	18:00	18:00	18:00			18:00			18:00	
PM Peaks	366	347	362			358			358	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 6 WB

Station #: 230200000050
Site ID: 000000000604
Location: Granite St. WB, west of Route 37
Direction: WEST

File: D0501013.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		11	23	14	17	16			16	65
02:00		9	2	6	7	6			6	24
03:00		7	5	3	5	5			5	20
04:00		7	7	4	8	6			6	26
05:00		15	19	14	13	15			15	61
06:00		56	57	59	56	57			57	228
07:00		178	154	176	143	163			163	651
08:00		480	437	449	397	441			441	1763
09:00		434	422	484	318	414			414	1658
10:00		239	230	250	211	232			232	930
11:00		184	186	201		190			190	571
12:00	216	232	227	234		227			227	909
13:00	214	255	244	218		233			233	931
14:00	255	288	231	261		259			259	1035
15:00	243	316	304	334		299			299	1197
16:00	356	333	374	343		352			352	1406
17:00	491	359	442	363		414			414	1655
18:00	330	336	384	416		366			366	1466
19:00	209	183	235	221		212			212	848
20:00	164	169	193	186		178			178	712
21:00	125	109	97	122		113			113	453
22:00	54	79	51	62		62			62	246
23:00	43	35	33	34		36			36	145
24:00	25	20	29	28		26			26	102
TOTALS	2725	4334	4386	4482	1175	4322			4322	17102
% AVG WKDY	63.0	100.3	101.5	103.7	27.2					
% AVG WEEK	63.0	100.3	101.5	103.7	27.2					
AM Times	12:00	08:00	08:00	09:00	08:00	08:00			08:00	
AM Peaks	216	480	437	484	397	441			441	
PM Times	17:00	17:00	17:00	18:00		17:00			17:00	
PM Peaks	491	359	442	416		414			414	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 7 EB

Station #: 230200000078
Site ID: 000000000703
Location: West St. EB, east of Route 37
Direction: EAST

File: D0501001.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		41	52	33	63	47			47	189
02:00		27	42	33	33	34			34	135
03:00		29	26	15	41	28			28	111
04:00		66	39	48	47	50			50	200
05:00		132	115	113	107	117			117	467
06:00		286	256	286	273	275			275	1101
07:00		671	613	602	523	602			602	2409
08:00		877	905	903	796	870			870	3481
09:00		824	806	831	638	775			775	3099
10:00		580	541	583	559	566			566	2263
11:00		538	498	550		529			529	1586
12:00	499	534	560	526		530			530	2119
13:00	589	604	567	567		582			582	2327
14:00	595	611	573	580		590			590	2359
15:00	671	679	708	768		706			706	2826
16:00	695	693	686	667		685			685	2741
17:00	681	636	669	720		676			676	2706
18:00	646	660	668	716		672			672	2690
19:00	556	560	607	654		594			594	2377
20:00	376	409	395	419		400			400	1599
21:00	247	262	274	333		279			279	1116
22:00	208	230	197	222		214			214	857
23:00	138	135	154	150		144			144	577
24:00	81	85	99	118		96			96	383
TOTALS	5982	10169	10050	10437	3080	10061			10061	39718
% AVG WKDY	59.5	101.1	99.9	103.7	30.6					
% AVG WEEK	59.5	101.1	99.9	103.7	30.6					
AM Times	12:00	08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks	499	877	905	903	796	870			870	
PM Times	16:00	16:00	15:00	15:00		15:00			15:00	
PM Peaks	695	693	708	768		706			706	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000155
Site ID: 000000000704
Location: West St. WB, east of Route 37
Direction: WEST

STA. 7 WB

File: D0501014.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		63	91	67	80	75			75	301
02:00		42	32	29	51	38			38	154
03:00		52	41	33	47	43			43	173
04:00		49	44	45	40	44			44	178
05:00		102	93	90	76	90			90	361
06:00		188	190	197	192	192			192	767
07:00		419	461	406	396	420			420	1682
08:00		648	654	671	648	655			655	2621
09:00		683	687	701	614	671			671	2685
10:00		558	544	563	547	553			553	2212
11:00		495	485	480		487			487	1460
12:00	537	631	563	591		580			580	2322
13:00	620	634	618	581		613			613	2453
14:00	668	691	559	714		658			658	2632
15:00	682	703	779	743		727			727	2907
16:00	845	813	872	892		856			856	3422
17:00	1002	898	961	984		961			961	3845
18:00	913	904	968	1000		946			946	3785
19:00	614	699	750	741		701			701	2804
20:00	518	529	567	522		534			534	2136
21:00	372	375	396	437		395			395	1580
22:00	223	246	223	295		247			247	987
23:00	151	163	151	184		162			162	649
24:00	126	110	139	159		134			134	534
TOTALS	7271	10695	10868	11125	2691	10782			10782	42650
% AVG WKDY	67.4	99.2	100.8	103.2	25.0					
% AVG WEEK	67.4	99.2	100.8	103.2	25.0					
AM Times	12:00	09:00	09:00	09:00	08:00	09:00			09:00	
AM Peaks	537	683	687	701	648	671			671	
PM Times	17:00	18:00	18:00	18:00		17:00			17:00	
PM Peaks	1002	904	968	1000		961			961	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 8 NB

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH

File: D0501016.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		17	17	26	23	21			21	83
02:00		13	13	15	13	14			14	54
03:00		16	15	24	15	18			18	70
04:00		28	43	29	30	32			32	130
05:00		83	77	85	74	80			80	319
06:00		342	317	300	272	308			308	1231
07:00		598	613	588		600			600	1799
08:00		853	854	853		853			853	2560
09:00		886	896	852		878			878	2634
10:00		585	587	548		573			573	1720
11:00		494	516	518		509			509	1528
12:00		503	571	562		545			545	1636
13:00	502	580	477	575		534			534	2134
14:00	505	537	563	533		534			534	2138
15:00	517	559	582	576		558			558	2234
16:00	578	606	630	597		603			603	2411
17:00	565	562	599	624		588			588	2350
18:00	535	559	623	631		587			587	2348
19:00	470	434	511	467		470			470	1882
20:00	346	359	435	372		378			378	1512
21:00	258	252	250	277		259			259	1037
22:00	131	150	139	163		146			146	583
23:00	91	76	87	105		90			90	359
24:00	52	51	63	109		69			69	275
TOTALS	4550	9143	9478	9429	427	9247			9247	33027
% AVG WKDY	49.2	98.9	102.5	102.0	4.6					
% AVG WEEK	49.2	98.9	102.5	102.0	4.6					
AM Times		09:00	09:00	08:00	06:00	09:00			09:00	
AM Peaks		886	896	853	272	878			878	
PM Times	16:00	16:00	16:00	18:00		16:00			16:00	
PM Peaks	578	606	630	631		603			603	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 85B

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH

File: D0501018.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		35	51	40	53	45			45	179
02:00		20	18	12	18	17			17	68
03:00		17	13	16	11	14			14	57
04:00		11	12	11	9	11			11	43
05:00		23	15	20	24	20			20	82
06:00		88	84	84	64	80			80	320
07:00		178	181	189	173	180			180	721
08:00		368	342	387	411	377			377	1508
09:00		434	420	421	421	424			424	1696
10:00		393	375	355	360	371			371	1483
11:00		344	371	383		366			366	1098
12:00		436	466	421		441			441	1323
13:00	598	543	540	484		541			541	2165
14:00	597	555	548	558		564			564	2258
15:00	649	683	715	713		690			690	2760
16:00	819	864	896	863		860			860	3442
17:00	864	826	922	834		862			862	3446
18:00	837	839	848	775		825			825	3299
19:00	597	679	752	639		667			667	2667
20:00	424	438	435	418		429			429	1715
21:00	345	328	357	381		353			353	1411
22:00	183	214	224	274		224			224	895
23:00	109	115	128	176		132			132	528
24:00	61	74	71	75		70			70	281
TOTALS	6083	8505	8784	8529	1544	8563			8563	33445
% AVG WKDY	71.0	99.3	102.6	99.6	18.0					
% AVG WEEK	71.0	99.3	102.6	99.6	18.0					
AM Times		12:00	12:00	09:00	09:00	12:00			12:00	
AM Peaks		436	466	421	421	441			441	
PM Times	17:00	16:00	17:00	16:00		17:00			17:00	
PM Peaks	864	864	922	863		862			862	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 9 EB

Station #: 230200000141
Site ID: 000000903904
Location: JW Leroy Jr. Way, west of Route 37
Direction: EAST

File: D0501034.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		0	0	0	0	0			0	0
02:00		0	2	0	0	0			0	2
03:00		0	0	0	0	0			0	0
04:00		0	1	0	0	0			0	1
05:00		2	2	1	2	2			2	7
06:00		6	7	8	4	6			6	25
07:00		44	49	47	46	46			46	186
08:00		316	259	283	307	291			291	1165
09:00		47	39	35	41	40			40	162
10:00		30	27	19	20	24			24	96
11:00		47	26	53		42			42	126
12:00		63	16	66		48			48	145
13:00	32	21	26	26		26			26	105
14:00	102	119	77	100		100			100	398
15:00	137	187	153	155		158			158	632
16:00	95	67	78	67		77			77	307
17:00	125	62	108	97		98			98	392
18:00	88	66	98	99		88			88	351
19:00	90	65	84	83		80			80	322
20:00	53	33	73	54		53			53	213
21:00	15	17	8	21		15			15	61
22:00	5	5	4	7		5			5	21
23:00	2	0	2	4		2			2	8
24:00	2	0	1	1		1			1	4
TOTALS	746	1197	1140	1226	420	1202			1202	4729
% AVG WKDY	62.1	99.6	94.8	102.0	34.9					
% AVG WEEK	62.1	99.6	94.8	102.0	34.9					
AM Times		08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		316	259	283	307	291			291	
PM Times	15:00	15:00	15:00	15:00		15:00			15:00	
PM Peaks	137	187	153	155		158			158	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 2 Page: 2
Starting: 5/1/2023

Station #: 230200000141 STA. 9 WB File: D0501034.prn
Site ID: 000000903904 City: Braintree
Location: JW Leroy Jr. Way, west of Route 37 County: volume
Direction: WEST

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		0	0	0	0	0			0	0
02:00		0	0	1	1	0			0	2
03:00		0	0	0	0	0			0	0
04:00		0	1	0	0	0			0	1
05:00		0	0	0	0	0			0	0
06:00		1	2	0	0	1			1	3
07:00		5	7	6	11	7			7	29
08:00		211	173	198	193	194			194	775
09:00		19	14	18	14	16			16	65
10:00		11	18	12	15	14			14	56
11:00		38	22	50		37			37	110
12:00		59	11	52		41			41	122
13:00	19	16	22	26		21			21	83
14:00	64	98	47	77		72			72	286
15:00	191	264	224	246		231			231	925
16:00	78	63	57	56		64			64	254
17:00	70	51	69	55		61			61	245
18:00	58	35	88	39		55			55	220
19:00	72	46	74	78		68			68	270
20:00	59	40	77	54		58			58	230
21:00	8	24	14	16		16			16	62
22:00	10	7	13	11		10			10	41
23:00	2	4	2	6		4			4	14
24:00	4	2	2	5		3			3	13
TOTALS	635	994	937	1006	234	973			973	3806
% AVG WKDY	65.3	102.2	96.3	103.4	24.0					
% AVG WEEK	65.3	102.2	96.3	103.4	24.0					
AM Times		08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		211	173	198	193	194			194	
PM Times	15:00	15:00	15:00	15:00		15:00			15:00	
PM Peaks	191	264	224	246		231			231	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 10 EB

Station #: 230200000145
Site ID: 000000001003
Location: Pond St. EB, west of Route 37
Direction: EAST

File: D0501019.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		50	43	48		47			47	141
02:00		23	22	20		22			22	65
03:00		18	16	18		17			17	52
04:00		23	21	27		24			24	71
05:00		57	54	66		59			59	177
06:00		205	222	221		216			216	648
07:00		586	577	541		568			568	1704
08:00		1201	1221	1222		1215			1215	3644
09:00		1112	1143	1010		1088			1088	3265
10:00		744	755	766		755			755	2265
11:00		677	661	655		664			664	1993
12:00		785	785	743		771			771	2313
13:00	829	755	832	805		805			805	3221
14:00	940	837	812	822		853			853	3411
15:00	1101	1158	1092	1151		1126			1126	4502
16:00	1144	1146	1169	732		1048			1048	4191
17:00	1261	1191	1192	797		1110			1110	4441
18:00	1231	1143	1280	850		1126			1126	4504
19:00	885	856	937	698		844			844	3376
20:00	712	665	755	585		679			679	2717
21:00	401	427	420	349		399			399	1597
22:00	255	261	264	284		266			266	1064
23:00	142	168	151	197		164			164	658
24:00	113	112	109	128		116			116	462
TOTALS	9014	14200	14533	12735		13982			13982	50482
% AVG WKDY	64.5	101.6	103.9	91.1						
% AVG WEEK	64.5	101.6	103.9	91.1						
AM Times		08:00	08:00	08:00		08:00			08:00	
AM Peaks		1201	1221	1222		1215			1215	
PM Times	17:00	17:00	18:00	15:00		15:00			15:00	
PM Peaks	1261	1191	1280	1151		1126			1126	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA: 10 WB

Station #: 230200000045
Site ID: 000000001004
Location: Pond St. WB, west of Route 37
Direction: WEST

File: D0501003.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		46	42	45	48	45			45	181
02:00		22	20	21	25	22			22	88
03:00		19	16	17	11	16			16	63
04:00		22	22	28	18	22			22	90
05:00		53	52	65	53	56			56	223
06:00		204	222	223	149	200			200	798
07:00		589	580	533	388	522			522	2090
08:00		1190	1204	1227	811	1108			1108	4432
09:00		1094	1090	984	604	943			943	3772
10:00		697	724	739	440	650			650	2600
11:00		645	638	646		643			643	1929
12:00		746	773	728		749			749	2247
13:00	799	742	811	794		786			786	3146
14:00	897	833	766	808		826			826	3304
15:00	1069	1130	1053	1093		1086			1086	4345
16:00	1099	1107	1134	616		989			989	3956
17:00	1222	1171	1160	670		1056			1056	4223
18:00	1172	1110	1248	742		1068			1068	4272
19:00	849	842	895	621		802			802	3207
20:00	694	648	742	551		659			659	2635
21:00	398	430	415	337		395			395	1580
22:00	251	257	257	261		256			256	1026
23:00	137	163	151	191		160			160	642
24:00	111	111	109	120		113			113	451
TOTALS	8698	13871	14124	12060	2547	13172			13172	51300
% AVG WKDY	66.0	105.3	107.2	91.6	19.3					
% AVG WEEK	66.0	105.3	107.2	91.6	19.3					
AM Times		08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		1190	1204	1227	811	1108			1108	
PM Times	17:00	17:00	18:00	15:00		15:00			15:00	
PM Peaks	1222	1171	1248	1093		1086			1086	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 11 EB

Station #: 230200000033
Site ID: 000000110304
Location: Hancock St., east of Route 37
Direction: EAST

File: D0501032.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		25	27			26			26	52
02:00		14	12			13			13	26
03:00		7	19			13			13	26
04:00		25	33			29			29	58
05:00		91	93			92			92	184
06:00		288	276			282			282	564
07:00		392	389			390			390	781
08:00		482	528			505			505	1010
09:00		460	438			449			449	898
10:00		352	347			350			350	699
11:00		322	351			336			336	673
12:00		310	339			324			324	649
13:00	398	325	362			362			362	1085
14:00	344	316	323			328			328	983
15:00	351	367	340			353			353	1058
16:00	370	330	379			360			360	1079
17:00	389	338	378			368			368	1105
18:00	345	372	356			358			358	1073
19:00	272	285	293			283			283	850
20:00	249	231				240			240	480
21:00	199	180				190			190	379
22:00	141	158				150			150	299
23:00	81	98				90			90	179
24:00	60	53				56			56	113
TOTALS	3199	5821	5283			5947			5947	14303
% AVG WKDY	53.8	97.9	88.8							
% AVG WEEK	53.8	97.9	88.8							
AM Times		08:00	08:00			08:00			08:00	
AM Peaks		482	528			505			505	
PM Times	13:00	18:00	16:00			17:00			17:00	
PM Peaks	398	372	379			368			368	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 2
Starting: 5/1/2023

Station #: 230200000033
Site ID: 000000110304
Location: Hancock St., east of Route 37
Direction: WEST

STA. 11 WB

File: D0501032.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		50	53			52			52	103
02:00		25	21			23			23	46
03:00		16	21			18			18	37
04:00		13	20			16			16	33
05:00		32	32			32			32	64
06:00		79	55			67			67	134
07:00		142	153			148			148	295
08:00		286	290			288			288	576
09:00		353	351			352			352	704
10:00		294	313			304			304	607
11:00		323	311			317			317	634
12:00		366	374			370			370	740
13:00	390	388	417			398			398	1195
14:00	415	409	417			414			414	1241
15:00	491	452	472			472			472	1415
16:00	534	563	546			548			548	1643
17:00	593	549	571			571			571	1713
18:00	554	574	569			566			566	1697
19:00	449	447	434			443			443	1330
20:00	344	361				352			352	705
21:00	276	264				270			270	540
22:00	163	202				182			182	365
23:00	99	120				110			110	219
24:00	91	93				92			92	184
TOTALS	4399	6401	5420			6405			6405	16220
% AVG WKDY	68.7	99.9	84.6							
% AVG WEEK	68.7	99.9	84.6							
AM Times		12:00	12:00			12:00			12:00	
AM Peaks		366	374			370			370	
PM Times	17:00	18:00	17:00			17:00			17:00	
PM Peaks	593	574	571			571			571	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 12 EB

Station #: 230200000053
Site ID: 000000001203
Location: Plain St. EB, east of Route 37
Direction: EAST

File: D0501020.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		17	13	11	21	16			16	62
02:00		10	7	3	12	8			8	32
03:00		10	4	12	10	9			9	36
04:00		11	10	11	7	10			10	39
05:00		57	44	49	51	50			50	201
06:00		146	150	153	153	150			150	602
07:00		256	261	260	226	251			251	1003
08:00		432	460	424	389	426			426	1705
09:00		501	498	467	456	480			480	1922
10:00		393	383	433	386	399			399	1595
11:00		395	416	372		394			394	1183
12:00		428	422	396		415			415	1246
13:00	503	446	431	434		454			454	1814
14:00	488	428	447	451		454			454	1814
15:00	606	563	581	562		578			578	2312
16:00	602	616	633	677		632			632	2528
17:00	612	626	671	651		640			640	2560
18:00	562	579	578	598		579			579	2317
19:00	395	412	463	482		438			438	1752
20:00	312	297	371	306		322			322	1286
21:00	200	203	227	214		211			211	844
22:00	93	131	114	175		128			128	513
23:00	81	74	83	82		80			80	320
24:00	40	47	41	49		44			44	177
TOTALS	4494	7078	7308	7272	1711	7168			7168	27863
% AVG WKDY	62.7	98.7	102.0	101.5	23.9					
% AVG WEEK	62.7	98.7	102.0	101.5	23.9					
AM Times		09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks		501	498	467	456	480			480	
PM Times	17:00	17:00	17:00	16:00		17:00			17:00	
PM Peaks	612	626	671	677		640			640	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 12 WB

Station #: 230200000127
Site ID: 000000001204
Location: Plain St. WB, east of Route 37
Direction: WEST

File: D0501001.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		25	21	30	44	30			30	120
02:00		14	10	14	13	13			13	51
03:00		11	9	14	10	11			11	44
04:00		12	15	11	7	11			11	45
05:00		45	48	40	42	44			44	175
06:00		146	129	139	112	132			132	526
07:00		368	374	378	309	357			357	1429
08:00		686	841	745	569	710			710	2841
09:00		695	788	688	508	670			670	2679
10:00		463	452	498	510	481			481	1923
11:00		450	473	462		462			462	1385
12:00		447	503	561		504			504	1511
13:00	568	490	443	589		522			522	2090
14:00	518	551	554	537		540			540	2160
15:00	536	524	576	527		541			541	2163
16:00	576	617	649	611		613			613	2453
17:00	642	608	605	691		636			636	2546
18:00	636	640	713	763		688			688	2752
19:00	441	473	533	502		487			487	1949
20:00	326	374	406	332		360			360	1438
21:00	269	249	240	233		248			248	991
22:00	134	142	171	174		155			155	621
23:00	99	95	92	106		98			98	392
24:00	77	75	84	101		84			84	337
TOTALS	4822	8200	8729	8746	2124	8397			8397	32621
% AVG WKDY	57.4	97.7	104.0	104.2	25.3					
% AVG WEEK	57.4	97.7	104.0	104.2	25.3					
AM Times		09:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		695	841	745	569	710			710	
PM Times	17:00	18:00	18:00	18:00		18:00			18:00	
PM Peaks	642	640	713	763		688			688	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA · 13 NB

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH

File: D0501022.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		36	35	50	26	37			37	147
02:00		16	25	16	23	20			20	80
03:00		25	34	28	29	29			29	116
04:00		52	61	63	53	57			57	229
05:00		197	173	182	178	182			182	730
06:00		614	616	589	557	594			594	2376
07:00		918	943	908	808	894			894	3577
08:00		1172	1202	1066	1036	1119			1119	4476
09:00		1119	1063	1004	938	1031			1031	4124
10:00		692	704	736	683	704			704	2815
11:00		621	665	600		629			629	1886
12:00		576	623	633		611			611	1832
13:00		629	647	629		635			635	1905
14:00	600	607	599	578		596			596	2384
15:00	695	672	701	720		697			697	2788
16:00	752	721	729	768		742			742	2970
17:00	766	707	783	713		742			742	2969
18:00	726	656	739	799		730			730	2920
19:00	557	505	580	560		550			550	2202
20:00	467	443	477	502		472			472	1889
21:00	321	271	303	358		313			313	1253
22:00	205	237	225	280		237			237	947
23:00	132	146	152	147		144			144	577
24:00	91	81	99	109		95			95	380
TOTALS	5312	11713	12178	12038	4331	11860			11860	45572
% AVG WKDY	44.8	98.8	102.7	101.5	36.5					
% AVG WEEK	44.8	98.8	102.7	101.5	36.5					
AM Times		08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		1172	1202	1066	1036	1119			1119	
PM Times	17:00	16:00	17:00	18:00		16:00			16:00	
PM Peaks	766	721	783	799		742			742	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 13 SB

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH

File: D0501024.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		90	92	100	109	98			98	391
02:00		39	45	49	44	44			44	177
03:00		26	29	31	32	30			30	118
04:00		18	25	18	22	21			21	83
05:00		41	40	42	43	42			42	166
06:00		134	116	121	105	119			119	476
07:00		272	309	313	306	300			300	1200
08:00		564	546	549	528	547			547	2187
09:00		585	567	626	540	580			580	2318
10:00		475	523	488	483	492			492	1969
11:00		506	513	494		504			504	1513
12:00		594	596	545		578			578	1735
13:00		623	678	655		652			652	1956
14:00	722	706	753	679		715			715	2860
15:00	933	927	977	888		931			931	3725
16:00	1003	1057	1087	945		1023			1023	4092
17:00	1154	1114	1106	1053		1107			1107	4427
18:00	1205	1080	1191	988		1116			1116	4464
19:00	927	955	999	1023		976			976	3904
20:00	743	703	798	863		777			777	3107
21:00	536	530	602	597		566			566	2265
22:00	349	377	412	430		392			392	1568
23:00	202	228	217	293		235			235	940
24:00	173	175	210	227		196			196	785
TOTALS	7947	11819	12431	12017	2212	12041			12041	46426
% AVG WKDY	66.0	98.2	103.2	99.8	18.4					
% AVG WEEK	66.0	98.2	103.2	99.8	18.4					
AM Times		12:00	12:00	09:00	09:00	09:00			09:00	
AM Peaks		594	596	626	540	580			580	
PM Times	18:00	17:00	18:00	17:00		18:00			18:00	
PM Peaks	1205	1114	1191	1053		1116			1116	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 14 EB

Station #: 230200000123
Site ID: 000000001403
Location: Braxton St. EB, west of Route 37
Direction: EAST

File: D0501025.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		8	10	14	2	8			8	34
02:00		4	2	1	0	2			2	7
03:00		0	1	1	0	0			0	2
04:00		1	1	3	2	2			2	7
05:00		4	3	3	2	3			3	12
06:00		3	3	4	5	4			4	15
07:00		18	20	13	17	17			17	68
08:00		37	31	30	27	31			31	125
09:00		58	46	30	46	45			45	180
10:00		70	58	64	60	63			63	252
11:00		65	60	54		60			60	179
12:00		91	68	64		74			74	223
13:00		75	79	80		78			78	234
14:00	61	82	81	63		72			72	287
15:00	113	96	102	106		104			104	417
16:00	115	124	173	120		133			133	532
17:00	100	112	197	101		128			128	510
18:00	139	136	120	112		127			127	507
19:00	72	76	105	85		84			84	338
20:00	102	110	90	117		105			105	419
21:00	87	50	53	69		65			65	259
22:00	50	66	48	88		63			63	252
23:00	33	14	16	19		20			20	82
24:00	52	48	51	53		51			51	204
TOTALS	924	1348	1418	1294	161	1339			1339	5145
% AVG WKDY	69.0	100.7	105.9	96.6	12.0					
% AVG WEEK	69.0	100.7	105.9	96.6	12.0					
AM Times		12:00	12:00	10:00	10:00	12:00			12:00	
AM Peaks		91	68	64	60	74			74	
PM Times	18:00	18:00	17:00	16:00		16:00			16:00	
PM Peaks	139	136	197	120		133			133	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA 14 WB

Station #: 230200000118
Site ID: 000000001404
Location: Braxton St. WB, west of Route 37
Direction: WEST

File: D0501026.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		6	5	6	3	5			5	20
02:00		0	2	0	0	0			0	2
03:00		1	1	0	0	0			0	2
04:00		1	2	4	4	3			3	11
05:00		5	6	10	5	6			6	26
06:00		32	22	25	34	28			28	113
07:00		91	81	81	76	82			82	329
08:00		89	74	61	67	73			73	291
09:00		157	152	121	139	142			142	569
10:00		147	118	131	132	132			132	528
11:00		82	76	76	80	78			78	314
12:00		85	68	74		76			76	227
13:00		103	93	97		98			98	293
14:00	96	88	85	74		86			86	343
15:00	131	120	131	101		121			121	483
16:00	126	124	147	99		124			124	496
17:00	79	111	99	93		96			96	382
18:00	155	136	124	140		139			139	555
19:00	121	98	105	111		109			109	435
20:00	128	130	110	146		128			128	514
21:00	71	50	57	63		60			60	241
22:00	49	45	48	60		50			50	202
23:00	14	12	9	12		12			12	47
24:00	20	22	24	27		23			23	93
TOTALS	990	1735	1639	1612	540	1671			1671	6516
% AVG WKDY	59.2	103.8	98.1	96.5	32.3					
% AVG WEEK	59.2	103.8	98.1	96.5	32.3					
AM Times		09:00	09:00	10:00	09:00	09:00			09:00	
AM Peaks		157	152	131	139	142			142	
PM Times	18:00	18:00	16:00	20:00		18:00			18:00	
PM Peaks	155	136	147	146		139			139	

Mass Highway Department

WEEKLY SUMMARY FOR ALL LANES
Starting: 5/1/2023

STA · 15NB

Station #: 230200000032
Site ID: 000000001501
Location: Peach St. NB, east of Route 37
Direction: ROAD TOTAL

File: D0501027.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED	THU	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		7				7			7	7
02:00		6				6			6	6
03:00		7				7			7	7
04:00						0			0	0
05:00						0			0	0
06:00						0			0	0
07:00						0			0	0
08:00						0			0	0
09:00						0			0	0
10:00						0			0	0
11:00						0			0	0
12:00						0			0	0
13:00						0			0	0
14:00	138					138			138	138
15:00	187					187			187	187
16:00	198					198			198	198
17:00	164					164			164	164
18:00	149					149			149	149
19:00	124					124			124	124
20:00	114					114			114	114
21:00	75					75			75	75
22:00	40					40			40	40
23:00	29					29			29	29
24:00	13					13			13	13
TOTALS	1231	20				1251			1251	1251
% AVG WKDY	98.4	1.6								
% AVG WEEK	98.4	1.6								
AM Times		01:00				01:00			01:00	
AM Peaks		7				7			7	
PM Times	16:00					16:00			16:00	
PM Peaks	198					198			198	

NO DATA

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 15SB

Station #: 230200000040
Site ID: 000000001502
Location: Peach St. SB, east of Route 37
Direction: SOUTH

File: D0501028.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		11	9	10	10	10			10	40
02:00		5	9	6	6	6			6	26
03:00		7	6	14	6	8			8	33
04:00		5	3	6	11	6			6	25
05:00		12	8	13	10	11			11	43
06:00		53	54	42	40	47			47	189
07:00		125	123	115	101	116			116	464
08:00		232	236	210	202	220			220	880
09:00		213	195	219	191	204			204	818
10:00		122	128	140	106	124			124	496
11:00		128	127	127	94	119			119	476
12:00		162	127	116		135			135	405
13:00		124	134	135		131			131	393
14:00	143	130	149	142		141			141	564
15:00	222	225	239	236		230			230	922
16:00	221	261	219	213		228			228	914
17:00	273	263	266	227		257			257	1029
18:00	275	262	300	247		271			271	1084
19:00	189	171	228	234		206			206	822
20:00	143	139	128	148		140			140	558
21:00	90	85	106	118		100			100	399
22:00	51	56	64	81		63			63	252
23:00	30	33	24	38		31			31	125
24:00	24	15	28	28		24			24	95
TOTALS	1661	2839	2910	2865	777	2828			2828	11052
% AVG WKDY	58.7	100.4	102.9	101.3	27.5					
% AVG WEEK	58.7	100.4	102.9	101.3	27.5					
AM Times		08:00	08:00	09:00	08:00	08:00			08:00	
AM Peaks		232	236	219	202	220			220	
PM Times	18:00	17:00	18:00	18:00		18:00			18:00	
PM Peaks	275	263	300	247		271			271	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000065 STA. 16 EB File: D0501033.prn
Site ID: 000000160304 City: Braintree
Location: Park Ave., east of Route 37 County: volume
Direction: EAST

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		2	2	2	6	3			3	12
02:00		1	0	0	0	0			0	1
03:00		0	0	3	2	1			1	5
04:00		1	1	0	2	1			1	4
05:00		1	0	1	1	1			1	3
06:00		3	4	2	4	3			3	13
07:00		8	10	8	9	9			9	35
08:00		30	29	49	32	35			35	140
09:00		57	53	52	50	53			53	212
10:00		21	22	26	25	24			24	94
11:00		37	36	20	28	30			30	121
12:00		31	45	28		35			35	104
13:00		26	32	42		33			33	100
14:00	56	30	44	37		42			42	167
15:00	77	79	90	78		81			81	324
16:00	54	56	63	58		58			58	231
17:00	78	76	71	51		69			69	276
18:00	51	74	66	69		65			65	260
19:00	62	49	58	48		54			54	217
20:00	62	46	67	55		58			58	230
21:00	31	41	42	37		38			38	151
22:00	22	22	20	22		22			22	86
23:00	11	14	11	13		12			12	49
24:00	5	5	5	14		7			7	29
TOTALS	509	710	771	715	159	734			734	2864
% AVG WKDY	69.3	96.7	105.0	97.4	21.7					
% AVG WEEK	69.3	96.7	105.0	97.4	21.7					
AM Times		09:00	09:00	09:00	09:00	09:00			09:00	
AM Peaks		57	53	52	50	53			53	
PM Times	17:00	15:00	15:00	15:00		15:00			15:00	
PM Peaks	78	79	90	78		81			81	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 2 Page: 2
Starting: 5/1/2023

Station #: 230200000065
Site ID: 000000160304
Location: Park Ave., east of Route 37
Direction: WEST

STA. 16 WB

File: D0501033.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		0	1	2	1	1			1	4
02:00		0	1	0	0	0			0	1
03:00		1	2	1	1	1			1	5
04:00		1	2	1	3	2			2	7
05:00		8	8	6	7	7			7	29
06:00		19	23	19	22	21			21	83
07:00		42	54	52	49	49			49	197
08:00		78	80	93	71	80			80	322
09:00		100	94	90	93	94			94	377
10:00		41	47	49	43	45			45	180
11:00		35	28	34	35	33			33	132
12:00		32	32	30		31			31	94
13:00		41	42	45		43			43	128
14:00	56	35	44	43		44			44	178
15:00	47	52	64	73		59			59	236
16:00	59	63	57	68		62			62	247
17:00	70	57	65	52		61			61	244
18:00	68	55	67	68		64			64	258
19:00	44	38	44	44		42			42	170
20:00	31	33	36	40		35			35	140
21:00	26	23	14	20		21			21	83
22:00	10	9	12	15		12			12	46
23:00	6	4	6	8		6			6	24
24:00	2	2	2	2		2			2	8
TOTALS	419	769	825	855	325	815			815	3193
% AVG WKDY	51.4	94.4	101.2	104.9	39.9					
% AVG WEEK	51.4	94.4	101.2	104.9	39.9					
AM Times		09:00	09:00	08:00	09:00	09:00			09:00	
AM Peaks		100	94	93	93	94			94	
PM Times	17:00	16:00	18:00	15:00		18:00			18:00	
PM Peaks	70	63	67	73		64			64	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 17 EB

Station #: 230200000164 File: D0501006.prn
Site ID: 000000001703 City: Braintree
Location: South St. EB, west of Route 37 County: volume
Direction: EAST

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		11	11	17	7	12			12	46
02:00		11	11	8	7	9			9	37
03:00		9	10	12	15	12			12	46
04:00		20	23	17	18	20			20	78
05:00		36	31	35	34	34			34	136
06:00		89	100	98	93	95			95	380
07:00		203	195	193	170	190			190	761
08:00		352	358	346	278	334			334	1334
09:00		354	308	331	273	316			316	1266
10:00		184	181	238	165	192			192	768
11:00		168	152	147	159	156			156	626
12:00		157	153	162		157			157	472
13:00		186	212	169		189			189	567
14:00	168	172	200	161		175			175	701
15:00	241	263	257	245		252			252	1006
16:00	275	286	270	277		277			277	1108
17:00	371	341	343	334		347			347	1389
18:00	302	306	320	310		310			310	1238
19:00	208	168	229	202		202			202	807
20:00	144	120	123	131		130			130	518
21:00	81	71	92	117		90			90	361
22:00	64	55	66	50		59			59	235
23:00	41	40	43	41		41			41	165
24:00	12	18	21	29		20			20	80
TOTALS	1907	3620	3709	3670	1219	3619			3619	14125
% AVG WKDY	52.7	100.0	102.5	101.4	33.7					
% AVG WEEK	52.7	100.0	102.5	101.4	33.7					
AM Times		09:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		354	358	346	278	334			334	
PM Times	17:00	17:00	17:00	17:00		17:00			17:00	
PM Peaks	371	341	343	334		347			347	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

Station #: 230200000149
Site ID: 000000001704
Location: South St. WB, west of Route 37
Direction: WEST

STA. 17 WB

File: D0501029.prn
City: Braintree
County: volume

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		13	23	19	19	18			18	74
02:00		7	5	7	9	7			7	28
03:00		12	14	14	15	14			14	55
04:00		8	6	9	11	8			8	34
05:00		12	21	16	23	18			18	72
06:00		75	63	63	47	62			62	248
07:00		101	132	131	130	124			124	494
08:00		254	263	278	224	255			255	1019
09:00		265	265	316	223	267			267	1069
10:00		158	169	177	143	162			162	647
11:00		142	139	147	153	145			145	581
12:00		175	169	157		167			167	501
13:00		196	214	195		202			202	605
14:00	202	212	201	183		200			200	798
15:00	248	242	259	236		246			246	985
16:00	281	331	327	312		313			313	1251
17:00	315	255	286	288		286			286	1144
18:00	305	263	298	274		285			285	1140
19:00	238	230	268	249		246			246	985
20:00	155	140	169	176		160			160	640
21:00	107	108	115	120		112			112	450
22:00	69	79	85	80		78			78	313
23:00	55	55	46	60		54			54	216
24:00	49	33	39	36		39			39	157
TOTALS	2024	3366	3576	3543	997	3468			3468	13506
% AVG WKDY	58.4	97.1	103.1	102.2	28.7					
% AVG WEEK	58.4	97.1	103.1	102.2	28.7					
AM Times		09:00	09:00	09:00	08:00	09:00			09:00	
AM Peaks		265	265	316	224	267			267	
PM Times	17:00	16:00	16:00	16:00		16:00			16:00	
PM Peaks	315	331	327	312		313			313	

Mass Highway Department

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 5/1/2023

STA. 18 NB

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH

File: D0501031.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		31	30	37	28	32			32	126
02:00		10	19	12	16	14			14	57
03:00		26	26	23	32	27			27	107
04:00		48	47	55	48	50			50	198
05:00		165	144	160	160	157			157	629
06:00		526	536	517	497	519			519	2076
07:00		763	763	755	671	738			738	2952
08:00		815	834	767	747	791			791	3163
09:00		738	786	732	683	735			735	2939
10:00		520	546	635	529	558			558	2230
11:00		430	509	486	438	466			466	1863
12:00		415	453	479		449			449	1347
13:00		501	471	494		489			489	1466
14:00		425	420	481		442			442	1326
15:00	448	465	471	497		470			470	1881
16:00	501	490	528	511		508			508	2030
17:00	493	493	527	528		510			510	2041
18:00	432	450	519	536		484			484	1937
19:00	401	385	388	390		391			391	1564
20:00	344	347	348	361		350			350	1400
21:00	230	209	232	266		234			234	937
22:00	126	176	188	200		172			172	690
23:00	100	141	110	96		112			112	447
24:00	61	36	56	59		53			53	212
TOTALS	3136	8605	8951	9077	3849	8751			8751	33618
% AVG WKDY	35.8	98.3	102.3	103.7	44.0					
% AVG WEEK	35.8	98.3	102.3	103.7	44.0					
AM Times		08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks		815	834	767	747	791			791	
PM Times	16:00	13:00	16:00	18:00		17:00			17:00	
PM Peaks	501	501	528	536		510			510	

Mass Highway Department

WEEKLY SUMMARY FOR ALL LANES
Starting: 5/1/2023

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: ROAD TOTAL

STA. 18 SB

File: D0501003.prn
City: Braintree
County: speed

TIME	MON 1	TUE 2	WED 3	THU 4	FRI 5	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		84	79	83	92	84			84	338
02:00		40	38	51	37	42			42	166
03:00		24	23	23	30	25			25	100
04:00		16	22	16	17	18			18	71
05:00		28	29	23	36	29			29	116
06:00		75	58	69	61	66			66	263
07:00		153	177	204	184	180			180	718
08:00		333	319	330	283	316			316	1265
09:00		345	336	406	332	355			355	1419
10:00		323	326	353	332	334			334	1334
11:00		342	350	373	379	361			361	1444
12:00		387	406	399		397			397	1192
13:00		447	505	462		471			471	1414
14:00		465	520	479		488			488	1464
15:00	558	598	584	587		582			582	2327
16:00	699	730	720	687		709			709	2836
17:00	812	838	826	771		812			812	3247
18:00	826	781	883	717		802			802	3207
19:00	606	701	647	657		653			653	2611
20:00	497	485	515	520		504			504	2017
21:00	391	402	401	429		406			406	1623
22:00	248	252	293	315		277			277	1108
23:00	181	171	173	211		184			184	736
24:00	134	160	182	184		165			165	660
TOTALS	4952	8180	8412	8349	1783	8260			8260	31676
% AVG WKDY	60.0	99.0	101.8	101.1	21.6					
% AVG WEEK	60.0	99.0	101.8	101.1	21.6					
AM Times		12:00	12:00	09:00	11:00	12:00			12:00	
AM Peaks		387	406	406	379	397			397	
PM Times	18:00	17:00	18:00	17:00		17:00			17:00	
PM Peaks	826	838	883	771		812			812	

Part 3: Speed Data

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA 4 NB
LN. 1

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
12:00	24	13	10	25	65	79	119	67	27	12	2	3	1	2	449
13:00	39	28	17	30	53	60	131	76	43	18	7	2	0	4	508
14:00	38	31	31	39	61	103	78	69	34	9	4	3	0	3	503
15:00	38	26	25	31	68	74	84	60	35	7	3	1	0	3	455
16:00	44	16	17	26	35	64	103	102	46	12	7	0	0	1	473
17:00	44	26	15	28	48	51	92	99	53	23	5	2	1	2	489
18:00	53	35	11	20	43	60	95	94	50	14	5	0	2	5	487
19:00	32	8	7	19	36	63	111	84	36	3	4	0	0	9	412
20:00	7	9	6	4	29	62	78	61	27	4	4	2	4	13	310
21:00	4	1	1	4	10	24	55	56	43	13	6	1	1	11	230
22:00	6	2	1	6	8	21	47	35	12	3	1	0	0	6	148
23:00	3	1	2	2	0	14	30	22	25	14	5	2	1	6	127
24:00	3	4	0	1	1	5	8	13	17	5	5	2	0	3	67
DAY TOTAL	335	200	143	235	457	680	1031	838	448	137	58	18	10	68	4658
PERCENTS	7.2%	4.3%	3.1%	5.0%	9.8%	14.6%	22.1%	18.0%	9.6%	2.9%	1.2%	0.4%	0.2%	1.5%	100.0%

Statistical Information...

15th Percentile Speed
25.7 mph

85th Percentile Speed
45.4 mph

Median Speed
37.0 mph

Average Speed
35.9 mph

10 MPH Pace Speed
35 mph to 45 mph
1869 vehicles in pace
Representing 43.9% of the total vehicles

Vehicles > 65 MPH
10
0.2%

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	2	4	6	8	5	4	1	0	0	0	30
02:00	0	0	0	1	1	2	1	8	11	4	2	1	0	0	31
03:00	0	1	0	1	0	0	0	2	6	1	4	0	0	2	17
04:00	5	0	0	0	0	2	0	3	4	6	9	3	0	1	33
05:00	7	1	0	2	1	4	4	18	31	16	11	6	0	0	101
06:00	19	16	4	3	9	13	13	25	54	52	48	31	7	13	307
07:00	41	22	13	17	28	42	66	67	91	64	53	20	5	29	558
08:00	49	31	23	43	55	68	98	142	103	31	13	11	1	34	702
09:00	46	28	31	27	33	96	105	150	75	27	15	7	0	26	666
10:00	37	26	12	19	38	68	90	90	62	17	12	4	3	16	494
11:00	27	10	6	23	36	67	112	95	49	5	2	1	0	5	438
12:00	34	16	15	29	51	82	95	78	37	10	4	2	1	4	458
13:00	31	16	35	37	73	81	101	88	26	5	1	0	1	19	514
14:00	20	18	24	28	58	75	119	83	44	6	3	1	1	10	490
15:00	22	17	13	23	26	41	103	104	52	19	8	2	0	31	461
16:00	20	21	14	27	51	93	138	100	31	9	3	1	2	16	526
17:00	26	17	13	19	35	64	128	92	54	11	8	2	0	15	484
18:00	17	13	13	23	49	69	122	101	39	10	5	2	2	17	482
19:00	9	9	2	7	31	55	116	100	40	9	5	2	1	13	399
20:00	7	7	0	10	25	56	81	69	27	3	3	2	1	15	306
21:00	4	3	2	4	7	30	55	52	30	5	0	1	1	16	210
22:00	1	1	1	4	7	35	42	39	22	8	1	0	0	7	168
23:00	2	2	0	1	4	23	28	20	21	8	4	0	0	4	117
24:00	1	0	0	0	3	6	12	15	17	6	2	3	0	4	69
DAY TOTAL	425	275	221	348	623	1076	1635	1549	931	336	217	102	26	297	8061
PERCENTS	5.3%	3.4%	2.7%	4.3%	7.7%	13.3%	20.3%	19.2%	11.5%	4.2%	2.7%	1.3%	0.3%	3.7%	100.0%

Statistical Information...

15th Percentile Speed
27.1 mph

85th Percentile Speed
47.8 mph

Median Speed
38.5 mph

Average Speed
37.7 mph

10 MPH Pace Speed
35 mph to 45 mph
3184 vehicles in pace
Representing 43.4% of the total vehicles

Vehicles > 65 MPH
26
0.4%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	2	5	10	10	5	4	0	0	0	36
02:00	0	0	0	0	1	4	2	9	9	4	2	0	0	0	31
03:00	0	0	0	0	0	0	1	4	6	2	2	0	0	0	15
04:00	0	0	0	0	0	2	2	10	10	10	7	5	0	3	49
05:00	4	3	0	0	0	0	11	16	12	20	18	8	0	8	100
06:00	18	10	4	0	6	19	17	35	43	51	39	29	5	4	280
07:00	37	21	4	9	18	23	44	81	114	81	40	26	6	21	525
08:00	45	35	15	32	40	73	95	196	122	41	17	6	2	33	752
09:00	49	33	30	32	70	96	144	112	67	25	7	6	4	14	689
10:00	26	17	18	26	56	74	100	77	55	17	6	1	0	15	488
11:00	18	11	9	27	40	66	120	86	29	10	1	0	3	8	428
12:00	29	33	25	41	59	91	124	64	18	7	3	2	2	14	512
13:00	26	14	13	24	56	85	119	77	27	6	2	1	1	12	463
14:00	27	23	20	16	61	72	112	96	47	4	3	0	0	5	486
15:00	44	25	25	40	53	61	98	95	33	5	2	1	0	4	486
16:00	31	23	6	20	35	75	100	79	39	19	10	1	0	13	451
17:00	30	20	12	10	46	90	115	102	36	16	7	1	1	19	505
18:00	24	24	20	31	42	65	121	112	57	9	8	0	1	14	528
19:00	10	14	2	12	47	77	116	80	51	19	7	7	2	16	460
20:00	3	7	1	8	20	58	88	60	30	12	6	2	2	16	313
21:00	0	4	1	4	13	35	62	63	19	5	4	2	0	6	218
22:00	1	5	1	3	10	29	32	37	13	8	3	0	0	4	146
23:00	3	0	2	0	7	14	31	25	20	11	3	1	0	4	121
24:00	1	1	0	0	3	9	21	16	16	8	2	0	1	4	82
DAY TOTAL	426	323	208	335	683	1120	1680	1542	883	395	203	99	30	237	8164
PERCENTS	5.2%	4.0%	2.5%	4.1%	8.4%	13.7%	20.6%	18.9%	10.8%	4.8%	2.5%	1.2%	0.4%	2.9%	100.0%

Statistical Information...

15th Percentile Speed
26.9 mph

85th Percentile Speed
47.8 mph

Median Speed
38.2 mph

Average Speed
37.5 mph

10 MPH Pace Speed
35 mph to 45 mph
3222 vehicles in pace
Representing 43.0% of the total vehicles

Vehicles > 65 MPH
30
0.4%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	2	5	5	13	5	1	1	0	1	34
02:00	1	1	0	0	0	1	2	6	4	3	1	0	0	1	20
03:00	1	0	0	0	0	1	1	5	3	3	3	1	0	0	18
04:00	2	0	0	1	0	1	2	5	10	5	5	4	1	2	38
05:00	7	5	0	0	1	4	9	19	26	11	16	3	0	1	102
06:00	13	13	2	3	12	23	32	45	41	40	30	15	2	14	285
07:00	36	29	14	22	30	39	45	86	96	66	36	18	2	16	535
08:00	56	33	27	39	56	56	91	166	112	32	9	2	4	38	721
09:00	30	35	21	39	53	98	111	154	66	20	6	3	1	28	665
10:00	27	14	13	21	42	70	93	86	58	17	7	1	0	13	462
11:00	28	16	21	26	32	57	112	101	45	10	4	0	4	15	471
12:00	26	13	14	24	63	83	129	82	34	6	2	3	0	8	487
13:00	13	23	18	46	78	90	112	61	34	8	7	1	2	12	505
14:00	18	22	29	23	49	79	110	104	43	3	2	0	0	20	502
15:00	23	16	23	44	63	89	104	105	23	10	8	0	1	22	531
16:00	19	22	21	16	25	57	114	91	53	20	5	1	0	29	473
17:00	21	19	16	29	45	82	119	102	50	15	3	3	0	19	523
18:00	30	25	11	19	35	71	119	105	56	15	6	1	1	14	508
19:00	10	11	13	36	53	66	121	72	39	6	2	1	0	12	442
20:00	8	3	1	15	51	59	81	78	29	6	3	0	1	17	352
21:00	9	3	2	2	18	44	71	54	23	10	2	1	0	7	246
22:00	3	1	0	2	15	35	57	40	15	5	5	0	0	4	182
23:00	1	2	1	2	5	15	21	23	24	8	5	1	2	6	116
24:00	1	0	0	1	2	10	21	20	15	11	2	2	1	2	88
DAY TOTAL	383	306	247	410	729	1132	1682	1615	912	335	170	62	22	301	8306
PERCENTS	4.6%	3.7%	3.0%	4.9%	8.8%	13.6%	20.3%	19.4%	11.0%	4.0%	2.0%	0.7%	0.3%	3.6%	100.0%

Statistical Information...

15th Percentile Speed
26.2 mph

85th Percentile Speed
47.0 mph

Median Speed
37.9 mph

Average Speed
37.0 mph

10 MPH Pace Speed
35 mph to 45 mph
3297 vehicles in pace
Representing 43.3% of the total vehicles

Vehicles > 65 MPH
22
0.3%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000077
Site ID: 110000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501036.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	2	0	0	1	2	8	5	14	2	1	2	0	1	38
02:00	0	0	0	1	0	1	0	7	5	3	2	0	0	0	19
03:00	1	0	0	1	0	0	0	1	9	3	2	1	0	0	18
04:00	2	3	0	0	1	0	3	9	8	10	2	1	0	2	41
05:00	3	8	0	0	1	5	12	12	23	9	10	3	2	2	90
06:00	15	19	2	6	4	8	21	43	53	39	39	14	1	11	275
07:00	27	24	7	13	23	25	55	86	77	35	39	22	2	17	452
08:00	47	23	18	20	31	47	81	126	105	29	20	8	4	28	587
09:00	18	12	6	29	40	64	90	114	50	19	10	7	4	18	481
10:00	20	9	7	35	37	71	101	95	34	8	6	0	4	22	449
DAY TOTAL	133	100	40	105	138	223	371	498	378	157	131	58	17	101	2450
PERCENTS	5.4%	4.1%	1.6%	4.3%	5.6%	9.1%	15.1%	20.3%	15.4%	6.4%	5.3%	2.4%	0.7%	4.1%	100.0%

Statistical Information...

15th Percentile Speed
28.2 mph

85th Percentile Speed
51.0 mph

Median Speed
41.3 mph

Average Speed
40.1 mph

10 MPH Pace Speed
40 mph to 50 mph
876 vehicles in pace
Representing 39.5% of the total vehicles

Vehicles > 65 MPH
17
0.8%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 4NB
LN. 2

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
12:00	31	19	25	45	57	54	53	21	5	2	1	0	0	0	313
13:00	73	17	32	47	53	47	43	30	22	2	1	1	0	0	368
14:00	79	30	41	46	64	42	36	16	10	2	2	0	0	0	368
15:00	70	31	36	45	55	60	53	35	8	1	2	0	0	0	396
16:00	68	18	15	21	47	52	81	35	15	2	0	0	0	0	354
17:00	53	28	24	33	49	51	62	54	10	6	0	0	0	0	370
18:00	66	23	21	33	45	40	65	50	8	1	0	0	0	0	352
19:00	26	14	16	40	54	75	69	27	8	1	0	0	0	0	330
20:00	16	3	6	20	42	64	48	17	4	0	0	1	0	0	221
21:00	18	2	1	4	33	30	34	28	6	0	0	0	0	0	156
22:00	8	1	4	8	27	35	28	3	2	1	0	0	0	0	117
23:00	8	0	3	3	13	22	24	12	2	0	1	0	0	0	88
24:00	3	0	0	0	1	11	14	18	3	0	0	0	0	0	50
DAY TOTAL	519	186	224	345	540	583	610	346	103	18	7	2	0	0	3483
PERCENTS	14.9%	5.3%	6.4%	9.9%	15.5%	16.7%	17.5%	9.9%	3.0%	0.5%	0.2%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
20.5 mph

85th Percentile Speed
40.5 mph

Median Speed
31.6 mph

Average Speed
31.0 mph

10 MPH Pace Speed
30 mph to 40 mph
1193 vehicles in pace
Representing 40.2% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	2	0	0	0	2	9	6	7	1	0	0	0	0	0	27
02:00	2	0	0	1	1	1	2	3	1	0	0	0	0	0	11
03:00	2	0	1	0	1	3	7	9	1	2	1	0	0	0	27
04:00	5	0	0	0	4	2	10	19	9	2	1	0	0	0	52
05:00	11	1	0	1	1	7	22	26	7	2	1	0	0	1	80
06:00	34	9	2	13	25	19	45	86	35	6	5	1	0	0	280
07:00	60	33	13	27	38	59	96	111	28	17	3	2	0	0	487
08:00	107	52	42	41	65	122	141	73	11	7	0	0	0	0	661
09:00	91	30	40	43	91	137	133	50	20	2	1	0	0	0	638
10:00	72	29	17	24	54	64	88	55	11	1	0	0	0	0	415
11:00	57	14	24	27	39	63	78	33	4	2	2	0	0	0	343
12:00	60	17	24	43	48	68	49	33	8	2	0	0	0	0	352
13:00	38	21	33	54	45	97	79	22	7	1	0	0	0	0	397
14:00	45	15	22	47	60	78	76	28	3	0	0	0	0	1	375
15:00	48	17	11	24	73	85	80	36	7	3	0	0	0	0	384
16:00	49	16	28	34	66	73	64	39	14	1	0	0	0	0	384
17:00	66	19	14	53	49	63	67	39	14	3	1	0	0	0	388
18:00	36	14	19	35	58	73	69	33	9	4	0	0	0	0	350
19:00	28	7	5	21	39	62	86	28	7	3	0	0	0	0	286
20:00	22	4	5	28	37	39	49	33	5	1	0	0	0	0	223
21:00	15	3	3	10	45	37	51	15	3	1	0	0	0	0	183
22:00	17	0	1	11	33	37	28	11	4	0	0	0	0	0	142
23:00	5	0	1	4	18	24	11	12	5	1	0	1	1	0	83
24:00	1	0	0	0	7	11	20	11	8	3	0	0	0	1	62
DAY TOTAL	873	301	305	541	899	1233	1357	812	222	64	15	4	1	3	6630
PERCENTS	13.2%	4.5%	4.6%	8.2%	13.6%	18.6%	20.5%	12.2%	3.3%	1.0%	0.2%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
22.4 mph

85th Percentile Speed
41.6 mph

Median Speed
33.4 mph

Average Speed
32.4 mph

10 MPH Pace Speed
30 mph to 40 mph
2590 vehicles in pace
Representing 45.0% of the total vehicles

Vehicles > 65 MPH
1
0.0%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	1	1	3	16	11	1	0	0	0	0	0	33
02:00	1	0	0	1	0	3	2	4	2	0	0	0	0	0	13
03:00	1	0	0	0	0	3	8	9	2	0	1	0	0	0	24
04:00	4	0	0	0	1	2	7	11	10	1	0	1	0	0	37
05:00	4	1	0	0	1	7	17	20	8	4	2	1	0	0	65
06:00	25	4	1	4	14	36	37	60	60	12	4	1	0	0	258
07:00	73	10	13	17	25	54	100	114	50	21	6	2	0	0	485
08:00	113	30	29	54	73	134	148	79	16	8	1	0	0	0	685
09:00	112	41	33	67	94	83	93	55	17	0	0	0	0	0	595
10:00	73	23	19	46	47	55	69	44	11	3	0	0	0	0	390
11:00	38	8	19	35	48	75	69	39	5	0	0	0	0	0	336
12:00	34	24	34	63	64	64	51	21	5	1	0	0	0	0	361
13:00	48	13	31	39	68	60	62	21	6	0	0	0	0	0	348
14:00	69	23	23	31	69	50	84	33	5	1	0	0	0	0	388
15:00	75	22	32	55	72	68	55	31	4	1	4	0	0	0	419
16:00	60	22	14	29	44	70	47	51	12	1	0	0	0	0	350
17:00	51	22	14	34	64	63	69	46	10	0	1	1	0	0	375
18:00	50	24	27	43	50	58	64	47	14	0	0	0	0	0	377
19:00	29	14	31	29	53	71	49	39	4	2	4	0	0	0	325
20:00	37	3	7	33	57	43	52	24	6	0	0	0	0	0	262
21:00	21	3	1	11	28	49	44	25	7	0	0	0	0	0	189
22:00	13	0	6	8	26	37	26	11	1	0	1	0	0	0	129
23:00	7	2	3	5	19	32	23	12	5	1	0	0	0	0	109
24:00	9	0	2	1	7	12	17	13	3	2	0	0	0	0	66
DAY TOTAL	947	289	339	606	925	1132	1209	820	264	58	24	6	0	0	6619
PERCENTS	14.3%	4.4%	5.1%	9.2%	14.0%	17.1%	18.3%	12.4%	4.0%	0.9%	0.4%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
21.8 mph

85th Percentile Speed
42.0 mph

Median Speed
33.0 mph

Average Speed
32.3 mph

10 MPH Pace Speed
30 mph to 40 mph
2341 vehicles in pace
Representing 41.3% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	1	1	0	4	6	4	6	3	1	0	0	0	0	26
02:00	0	0	0	0	0	3	6	4	3	1	0	0	0	0	17
03:00	1	1	0	0	2	2	6	6	3	2	0	0	0	0	23
04:00	3	2	0	2	1	4	9	9	3	0	0	0	0	0	33
05:00	8	5	4	1	2	7	16	25	9	4	0	0	0	0	81
06:00	33	6	6	10	13	43	52	80	31	8	2	1	0	0	285
07:00	77	20	19	42	39	49	97	92	30	4	8	2	0	0	479
08:00	72	54	41	59	71	134	165	69	14	1	4	1	0	0	685
09:00	63	38	48	57	106	125	136	29	9	2	0	0	0	0	613
10:00	42	10	13	37	54	77	110	37	9	1	0	0	0	0	390
11:00	41	9	18	35	61	69	70	42	6	0	0	1	0	0	352
12:00	42	10	20	46	63	55	51	25	7	2	0	0	0	0	321
13:00	42	13	26	59	67	74	49	24	2	1	0	0	0	0	357
14:00	50	32	26	36	44	63	66	32	2	0	1	0	0	0	352
15:00	53	31	29	40	75	83	73	39	6	1	0	0	0	0	430
16:00	43	19	15	40	63	52	69	39	10	3	0	0	0	0	353
17:00	50	17	4	46	43	91	55	21	15	2	0	0	0	0	344
18:00	54	30	28	46	56	81	82	39	9	1	1	0	0	0	427
19:00	44	22	25	32	62	51	68	27	5	1	0	0	0	0	337
20:00	23	7	6	32	48	48	44	20	7	1	0	0	0	0	236
21:00	20	7	4	16	45	46	48	20	1	0	0	0	0	0	207
22:00	12	5	9	10	35	31	24	4	1	4	0	0	0	0	135
23:00	10	0	1	6	11	25	22	15	7	3	1	0	0	0	101
24:00	12	3	1	2	7	19	26	25	3	0	0	0	0	0	98
DAY TOTAL	795	342	344	654	972	1238	1348	729	195	43	17	5	0	0	6682
PERCENTS	11.9%	5.1%	5.1%	9.8%	14.5%	18.5%	20.2%	10.9%	2.9%	0.6%	0.3%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
21.5 mph

85th Percentile Speed
40.7 mph

Median Speed
32.6 mph

Average Speed
31.7 mph

10 MPH Pace Speed
30 mph to 40 mph
2586 vehicles in pace
Representing 43.9% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000034
Site ID: 220000000401
Location: Route 37 NB, north of Davis Rd.
Direction: NORTH
Lane: 1

File: D0501040.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	3	1	0	0	3	9	12	7	1	1	0	0	0	0	37
02:00	0	0	0	0	0	3	10	8	2	0	0	0	0	0	23
03:00	3	2	3	1	0	3	7	12	1	1	1	0	0	0	34
04:00	3	0	1	1	3	3	5	15	4	4	0	0	0	0	39
05:00	9	1	0	0	3	7	22	23	16	1	1	0	0	0	83
06:00	34	18	2	3	14	18	28	68	33	6	3	0	0	1	228
07:00	70	12	7	18	41	64	76	79	46	8	2	3	0	0	426
08:00	70	23	21	21	54	88	113	91	25	2	2	1	0	0	511
09:00	69	11	8	41	65	93	90	52	12	2	0	0	0	0	443
10:00	33	13	29	40	51	82	72	36	1	0	0	0	0	0	357
DAY TOTAL	294	81	71	125	234	370	435	391	141	25	9	4	0	1	2181
PERCENTS	13.5%	3.7%	3.3%	5.7%	10.7%	17.0%	19.9%	17.9%	6.5%	1.1%	0.4%	0.2%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
25.1 mph

85th Percentile Speed
43.7 mph

Median Speed
35.7 mph

Average Speed
34.6 mph

10 MPH Pace Speed
35 mph to 45 mph
826 vehicles in pace
Representing 43.8% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 4 SB

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL
Lane:

LN. 1

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
12:00	49	12	0	4	24	67	119	86	29	5	4	0	4	40	443
13:00	86	16	0	6	21	93	112	100	39	7	1	2	3	41	527
14:00	86	14	1	2	21	82	119	88	37	7	3	2	2	51	515
15:00	81	21	1	3	29	96	124	80	40	4	5	2	2	65	553
16:00	93	28	0	1	40	132	200	95	23	6	2	1	4	70	695
17:00	217	98	34	32	29	90	119	59	25	8	2	1	5	43	762
18:00	100	20	6	9	103	145	125	77	16	2	4	3	5	57	672
19:00	59	15	1	1	24	85	143	84	31	8	1	4	3	117	576
20:00	32	18	1	3	14	66	108	94	15	9	2	2	4	91	459
21:00	16	11	1	0	27	38	78	81	17	1	0	2	2	65	339
22:00	9	9	0	1	9	51	56	42	12	2	0	1	2	54	248
23:00	8	5	3	0	4	18	35	53	8	3	1	2	1	18	159
24:00	4	1	0	0	1	8	27	36	18	3	0	2	0	21	121
DAY TOTAL	840	268	48	62	346	971	1365	975	310	65	25	24	37	733	6069
PERCENTS	13.8%	4.4%	0.8%	1.0%	5.7%	16.0%	22.5%	16.1%	5.1%	1.1%	0.4%	0.4%	0.6%	12.1%	100.0%

Statistical Information...

15th Percentile Speed
29.3 mph

85th Percentile Speed
43.9 mph

Median Speed
37.0 mph

Average Speed
36.2 mph

10 MPH Pace Speed
35 mph to 45 mph
2340 vehicles in pace
Representing 52.0% of the total vehicles

Vehicles > 65 MPH
37
0.8%

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL
Lane:

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	2	1	0	1	2	9	19	15	9	3	0	0	0	7	68
02:00	2	0	0	0	3	0	8	15	8	4	1	2	0	4	47
03:00	4	0	0	0	2	2	11	11	10	4	0	0	0	2	46
04:00	5	1	0	0	0	2	6	8	11	5	2	1	0	2	43
05:00	8	2	0	0	1	5	12	21	15	7	4	2	1	2	80
06:00	16	5	1	0	0	2	11	47	50	12	11	4	0	6	165
07:00	26	13	2	0	3	14	45	122	32	15	8	3	0	18	301
08:00	31	18	0	0	3	30	72	113	38	9	8	2	1	31	356
09:00	48	29	1	6	15	48	100	99	45	10	3	8	1	66	479
10:00	75	20	1	3	16	60	118	77	17	3	6	3	4	53	456
11:00	70	27	0	1	12	39	99	69	34	3	3	2	0	38	397
12:00	80	20	18	16	24	66	104	90	16	8	0	1	1	79	523
13:00	43	8	1	1	21	108	147	70	15	2	2	3	3	90	514
14:00	40	4	0	2	35	149	166	72	18	2	5	1	6	84	584
15:00	51	19	3	3	35	112	154	89	27	5	4	7	0	83	592
16:00	69	20	0	4	39	141	155	108	34	8	8	11	1	80	678
17:00	68	15	2	3	30	131	204	117	21	2	7	0	3	72	675
18:00	63	21	0	6	57	138	203	117	26	0	3	0	5	92	731
19:00	58	17	0	1	22	86	171	130	40	7	5	1	1	91	630
20:00	38	8	1	0	18	56	124	115	31	5	5	0	2	59	462
21:00	22	2	0	4	20	51	84	71	22	7	0	1	3	29	316
22:00	8	2	0	2	16	52	78	48	10	5	1	1	0	35	258
23:00	5	3	0	1	5	25	37	46	17	5	3	2	0	29	178
24:00	7	5	0	0	1	6	21	37	16	4	4	0	0	3	104
DAY TOTAL	839	260	30	54	380	1332	2149	1707	562	135	93	55	32	1055	8683
PERCENTS	9.7%	3.0%	0.3%	0.6%	4.4%	15.3%	24.7%	19.7%	6.5%	1.6%	1.1%	0.6%	0.4%	12.2%	100.0%

Statistical Information...

15th Percentile Speed
31.1 mph

85th Percentile Speed
44.6 mph

Median Speed
38.1 mph

Average Speed
37.8 mph

10 MPH Pace Speed
35 mph to 45 mph
3856 vehicles in pace
Representing 56.8% of the total vehicles

Vehicles > 65 MPH
32
0.5%

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL
Lane:

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	4	3	0	1	2	4	23	32	12	1	2	2	0	5	91
02:00	5	1	0	0	0	4	3	15	5	0	0	0	1	1	35
03:00	5	1	0	0	0	5	11	10	2	3	1	0	0	0	38
04:00	0	1	1	0	0	1	9	14	7	2	3	0	0	2	40
05:00	8	3	0	1	3	5	6	18	15	6	5	1	0	3	74
06:00	8	4	1	0	1	4	16	53	54	14	7	0	1	4	167
07:00	33	12	2	0	3	14	48	94	64	18	13	5	2	12	320
08:00	38	16	1	2	5	15	64	110	62	17	3	2	0	39	374
09:00	77	18	2	0	6	36	90	123	41	13	5	1	0	65	477
10:00	60	13	1	0	9	41	91	115	30	9	5	3	2	57	436
11:00	53	13	1	1	15	47	112	105	34	4	2	1	5	57	450
12:00	60	23	1	2	13	75	131	84	27	3	0	1	1	83	504
13:00	60	19	0	4	37	95	120	73	29	6	1	11	2	63	520
14:00	71	20	0	2	15	86	110	102	31	9	2	0	0	70	518
15:00	88	22	1	4	31	101	170	78	23	6	2	6	1	67	600
16:00	93	11	1	4	24	168	185	106	21	6	4	11	5	104	743
17:00	115	48	35	46	114	125	99	45	17	5	3	1	0	73	726
18:00	78	28	0	0	35	133	174	100	25	3	5	5	2	107	695
19:00	71	26	0	3	19	103	179	119	36	1	2	2	3	97	661
20:00	42	9	0	4	24	75	124	74	29	3	2	1	7	75	469
21:00	17	8	1	2	21	64	89	91	20	4	3	1	0	37	358
22:00	19	1	1	0	23	54	70	36	7	2	0	2	3	31	249
23:00	5	3	0	1	2	27	24	41	17	2	1	0	0	25	148
24:00	12	4	0	0	1	20	30	30	13	9	4	2	0	19	144
DAY TOTAL	1022	307	49	77	403	1302	1978	1668	621	146	75	58	35	1096	8837
PERCENTS	11.6%	3.5%	0.6%	0.9%	4.6%	14.7%	22.4%	18.9%	7.0%	1.7%	0.8%	0.7%	0.4%	12.4%	100.0%

Statistical Information...

15th Percentile Speed
30.7 mph

85th Percentile Speed
44.8 mph

Median Speed
38.1 mph

Average Speed
37.6 mph

10 MPH Pace Speed
35 mph to 45 mph
3646 vehicles in pace
Representing 54.3% of the total vehicles

Vehicles > 65 MPH
35
0.5%

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL
Lane:

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	2	2	2	0	4	10	17	17	10	1	0	0	0	13	78
02:00	2	1	0	0	1	5	10	6	4	1	0	0	0	0	30
03:00	1	5	0	0	0	4	5	13	5	1	2	0	0	0	36
04:00	5	1	0	0	0	2	10	14	7	0	1	0	0	1	41
05:00	8	2	0	0	3	5	13	18	12	6	1	3	0	4	75
06:00	15	8	0	0	3	8	24	56	30	10	5	2	0	5	166
07:00	17	16	2	0	2	8	60	110	51	18	11	4	1	27	327
08:00	48	20	1	0	3	22	101	113	53	7	6	6	0	40	420
09:00	49	17	3	0	10	62	120	96	45	6	2	10	0	45	465
10:00	43	16	1	3	20	51	110	88	32	6	1	3	0	40	414
11:00	32	8	0	1	14	54	124	86	27	11	1	4	2	42	406
12:00	43	9	1	3	16	62	166	95	32	3	1	1	2	49	483
13:00	43	21	0	1	18	86	134	114	37	3	8	0	2	67	534
14:00	47	14	0	3	22	82	171	99	27	5	0	2	1	61	534
15:00	66	24	1	5	36	103	166	98	36	4	3	2	3	64	611
16:00	68	16	5	8	46	120	166	114	33	7	3	0	5	97	688
17:00	272	96	39	23	55	68	70	39	12	1	0	1	2	28	706
18:00	84	19	0	5	37	132	224	81	25	5	7	2	3	94	718
19:00	39	28	1	10	16	94	151	85	21	2	1	3	0	62	513
20:00	38	20	0	3	18	57	112	92	25	7	2	1	0	70	445
21:00	21	10	0	3	17	61	128	57	16	4	0	1	5	52	375
22:00	14	16	0	0	15	51	97	60	13	4	0	1	0	39	310
23:00	9	12	0	1	11	25	56	55	13	3	1	0	0	15	201
24:00	7	3	1	0	0	12	37	54	18	1	0	1	1	19	154
DAY TOTAL	973	384	57	69	367	1184	2272	1660	584	116	56	47	27	934	8730
PERCENTS	11.1%	4.4%	0.7%	0.8%	4.2%	13.6%	26.0%	19.0%	6.7%	1.3%	0.6%	0.5%	0.3%	10.7%	100.0%

Statistical Information...

15th Percentile Speed
30.6 mph

85th Percentile Speed
44.4 mph

Median Speed
38.0 mph

Average Speed
37.2 mph

10 MPH Pace Speed
35 mph to 45 mph
3932 vehicles in pace
Representing 57.6% of the total vehicles

Vehicles > 65 MPH
27
0.4%

Station #: 230200000057
Site ID: 110000000402
Location: Route 37 SB, north of Davis Rd.
Direction: ROAD TOTAL
Lane:

File: D0501038.prn
City: Braintree
County: speed ln.1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	3	3	0	0	1	9	31	23	13	0	2	0	2	6	93
02:00	3	2	0	0	3	7	6	8	6	3	1	0	0	10	49
03:00	1	3	1	0	0	3	12	12	5	3	0	0	0	1	41
04:00	4	3	1	0	1	2	7	8	5	4	1	1	0	4	41
05:00	4	4	0	0	0	3	16	21	9	7	0	0	0	3	67
06:00	21	5	3	1	0	2	15	45	36	14	3	1	0	11	157
07:00	48	11	2	0	2	8	40	95	49	13	4	2	1	21	296
08:00	55	24	2	0	3	22	76	107	41	8	8	4	2	36	388
09:00	54	16	1	1	12	66	132	108	29	5	4	0	1	45	474
DAY TOTAL	193	71	10	2	22	122	335	427	193	57	23	8	6	137	1606
PERCENTS	12.0%	4.4%	0.6%	0.1%	1.4%	7.6%	20.9%	26.6%	12.0%	3.5%	1.4%	0.5%	0.4%	8.5%	100.0%

Statistical Information...

15th Percentile Speed
33.6 mph

85th Percentile Speed
47.5 mph

Median Speed
40.9 mph

Average Speed
39.8 mph

10 MPH Pace Speed
35 mph to 45 mph
762 vehicles in pace
Representing 59.7% of the total vehicles

Vehicles > 65 MPH
6
0.5%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 4SB
LN. 2

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH
Lane: 1

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
12:00	14	0	0	0	10	43	78	62	50	11	3	0	0	0	271
13:00	30	3	1	0	5	51	100	124	78	15	6	1	0	0	414
14:00	20	6	0	0	20	46	111	110	46	29	4	0	0	0	392
15:00	20	2	1	1	9	78	111	115	44	17	4	3	1	0	406
16:00	49	7	1	0	8	76	184	176	67	13	2	4	1	1	589
17:00	139	77	34	43	70	101	114	130	38	8	5	0	1	0	760
18:00	36	6	1	4	30	109	178	128	62	3	0	0	0	0	557
19:00	26	0	0	0	22	50	108	118	47	6	6	1	0	1	385
20:00	5	1	1	0	9	44	71	63	37	14	5	0	0	0	250
21:00	8	0	0	0	12	39	58	59	26	6	0	1	0	2	211
22:00	0	1	1	1	6	21	37	35	11	4	1	1	0	0	119
23:00	2	0	0	1	1	10	17	23	11	3	2	1	0	0	71
24:00	1	1	0	0	0	2	8	19	10	8	0	0	0	0	49
DAY TOTAL	350	104	40	50	202	670	1175	1162	527	137	38	12	3	4	4474
PERCENTS	7.8%	2.3%	0.9%	1.1%	4.5%	15.0%	26.3%	26.0%	11.8%	3.1%	0.8%	0.3%	0.1%	0.1%	100.0%

Statistical Information...

15th Percentile Speed
31.7 mph

85th Percentile Speed
45.9 mph

Median Speed
39.2 mph

Average Speed
38.7 mph

10 MPH Pace Speed
35 mph to 45 mph
2337 vehicles in pace
Representing 56.7% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH
Lane: 1

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	1	0	0	0	0	3	8	5	8	2	0	0	0	1	28
02:00	0	0	0	0	1	1	1	3	7	2	2	0	0	0	17
03:00	1	0	0	0	1	1	4	6	5	2	0	0	0	0	20
04:00	0	0	0	0	0	1	0	4	1	0	0	1	0	0	7
05:00	0	0	0	0	0	0	3	3	7	3	1	0	0	0	17
06:00	3	0	1	0	1	2	4	15	29	9	12	3	0	0	79
07:00	7	0	0	0	0	3	14	56	49	22	8	3	1	3	166
08:00	7	0	0	0	5	3	31	83	54	11	10	4	1	2	211
09:00	15	5	0	0	4	31	43	113	84	21	3	0	0	1	320
10:00	16	2	0	0	1	12	48	96	47	18	16	1	0	2	259
11:00	14	2	0	0	6	23	65	78	44	10	2	0	1	0	245
12:00	24	4	0	3	15	28	64	79	39	8	4	3	1	0	272
13:00	14	1	0	0	17	58	124	98	41	9	3	1	0	0	366
14:00	6	1	0	5	22	80	128	100	35	6	2	0	0	2	387
15:00	17	2	0	0	19	101	144	126	42	12	2	1	0	0	466
16:00	32	1	0	7	26	82	175	186	62	9	3	3	0	0	586
17:00	32	4	0	1	12	82	182	186	59	7	1	1	0	0	567
18:00	19	4	0	3	19	75	214	175	50	8	1	2	0	2	572
19:00	6	4	0	0	12	66	138	143	70	13	4	2	0	1	459
20:00	6	2	1	0	11	41	74	80	42	11	7	0	0	1	276
21:00	3	3	0	1	12	42	56	58	25	3	1	0	0	0	204
22:00	3	0	0	0	6	27	60	39	14	1	1	0	0	5	156
23:00	1	0	0	0	4	21	16	26	15	5	0	1	0	0	89
24:00	2	0	0	0	1	4	14	19	13	5	1	1	0	1	61
DAY TOTAL	229	35	2	20	195	787	1610	1777	842	197	84	27	4	21	5830
PERCENTS	3.9%	0.6%	0.0%	0.3%	3.3%	13.5%	27.6%	30.5%	14.4%	3.4%	1.4%	0.5%	0.1%	0.4%	100.0%

Statistical Information...

15th Percentile Speed
33.7 mph

85th Percentile Speed
46.9 mph

Median Speed
40.4 mph

Average Speed
40.3 mph

10 MPH Pace Speed
35 mph to 45 mph
3387 vehicles in pace
Representing 60.7% of the total vehicles

Vehicles > 65 MPH
4
0.1%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH
Lane: 1

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	2	7	10	2	1	2	0	0	0	24
02:00	0	0	0	0	0	0	0	4	4	1	1	0	0	0	10
03:00	0	0	0	0	0	2	4	2	1	1	0	0	0	0	10
04:00	0	0	0	1	0	0	4	0	1	0	1	1	0	0	8
05:00	0	0	0	0	1	1	2	1	4	2	1	0	0	0	12
06:00	2	0	0	0	1	1	5	16	28	10	5	2	0	1	71
07:00	8	1	1	0	0	3	10	40	54	31	20	4	1	1	174
08:00	7	2	1	0	2	6	21	83	72	25	10	1	0	0	230
09:00	16	11	1	0	6	22	51	108	68	22	5	1	0	1	312
10:00	18	2	0	0	5	27	50	76	57	12	10	2	0	1	260
11:00	16	1	2	0	5	29	50	73	46	11	8	2	0	1	244
12:00	12	2	1	1	7	42	77	95	61	7	1	0	0	2	308
13:00	18	1	0	0	14	63	100	91	44	13	3	1	0	0	348
14:00	20	7	0	0	7	48	91	90	59	14	0	2	0	1	339
15:00	28	2	2	3	7	75	131	142	65	14	6	2	0	2	479
16:00	53	5	0	2	18	79	209	166	59	14	7	0	0	1	613
17:00	82	30	34	24	78	119	133	95	32	5	3	2	0	2	639
18:00	29	1	0	1	20	98	170	201	62	16	4	1	0	2	605
19:00	19	5	1	1	15	83	135	142	62	10	3	0	1	2	479
20:00	7	1	1	0	15	55	108	83	25	13	2	0	1	0	311
21:00	2	4	0	2	13	56	49	58	36	5	1	0	0	2	228
22:00	0	0	0	1	10	38	40	30	9	2	1	0	0	0	131
23:00	0	0	0	4	3	14	19	27	22	7	1	1	0	0	98
24:00	0	0	0	0	1	5	12	23	8	1	0	1	0	0	51
DAY TOTAL	337	75	44	40	228	868	1478	1656	881	237	95	23	3	19	5984
PERCENTS	5.6%	1.3%	0.7%	0.7%	3.8%	14.5%	24.7%	27.7%	14.7%	4.0%	1.6%	0.4%	0.1%	0.3%	100.0%

Statistical Information...

15th Percentile Speed
32.6 mph

85th Percentile Speed
47.3 mph

Median Speed
40.3 mph

Average Speed
39.9 mph

10 MPH Pace Speed
35 mph to 45 mph
3134 vehicles in pace
Representing 55.7% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH
Lane: 1

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	3	8	10	5	1	1	0	0	0	28
02:00	0	0	0	0	0	0	2	0	3	1	0	0	0	0	6
03:00	0	0	0	0	0	1	5	2	2	2	0	1	0	0	13
04:00	0	0	0	0	0	0	1	2	2	0	0	0	0	0	5
05:00	0	0	0	0	0	3	3	7	6	3	0	1	0	0	23
06:00	5	0	0	0	2	1	11	21	21	9	5	0	0	0	75
07:00	8	4	0	0	0	2	6	44	68	13	7	4	0	1	157
08:00	9	2	0	0	0	2	40	77	64	19	14	1	0	2	230
09:00	15	0	0	0	10	30	66	116	76	13	7	3	1	1	338
10:00	9	2	0	1	3	15	55	112	48	15	3	0	0	3	266
11:00	3	1	0	1	2	28	68	82	36	14	5	0	1	0	241
12:00	6	0	0	2	8	28	86	90	44	6	1	1	0	0	272
13:00	6	3	0	0	10	55	103	78	48	7	6	0	1	0	317
14:00	8	1	5	0	7	63	102	103	59	14	1	0	0	1	364
15:00	17	3	0	1	9	65	136	156	40	17	6	2	0	2	454
16:00	25	2	1	0	26	85	203	186	69	11	5	1	0	3	617
17:00	235	116	66	35	51	49	76	54	15	6	2	0	0	0	705
18:00	26	5	0	0	18	75	211	152	58	15	3	1	0	1	565
19:00	15	2	1	0	14	94	184	136	36	6	1	1	0	0	490
20:00	11	0	0	1	8	55	60	78	35	15	5	0	0	1	269
21:00	3	1	0	1	12	64	69	54	31	8	0	0	0	0	243
22:00	0	0	1	0	7	35	51	49	16	6	3	1	0	4	173
23:00	3	0	1	1	3	8	24	44	14	6	0	0	0	0	104
24:00	0	0	0	1	1	3	11	15	16	3	1	0	0	0	51
DAY TOTAL	404	142	75	44	191	764	1581	1668	812	210	76	17	3	19	6006
PERCENTS	6.7%	2.4%	1.2%	0.7%	3.2%	12.7%	26.3%	27.8%	13.5%	3.5%	1.3%	0.3%	0.0%	0.3%	100.0%

Statistical Information...

15th Percentile Speed
32.5 mph

85th Percentile Speed
46.7 mph

Median Speed
40.0 mph

Average Speed
39.3 mph

10 MPH Pace Speed
35 mph to 45 mph
3249 vehicles in pace
Representing 58.2% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000146
Site ID: 220000000402
Location: Route 37 SB, north of Davis Rd.
Direction: SOUTH
Lane: 1

File: D0501042.prn
City: Braintree
County: speed ln.2

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	5	7	10	10	1	1	0	0	0	34
02:00	2	0	0	0	1	0	0	7	2	1	0	0	0	0	13
03:00	0	0	0	0	0	0	1	5	2	1	0	0	0	0	9
04:00	0	0	0	0	0	0	1	0	4	0	0	0	0	0	5
05:00	0	0	0	0	0	2	3	3	5	0	1	0	0	0	14
06:00	4	2	0	0	0	3	8	13	15	12	9	0	0	0	66
07:00	3	0	0	0	1	5	9	47	36	23	7	5	0	2	138
08:00	9	1	0	0	1	4	24	83	62	14	9	2	0	0	209
09:00	13	2	0	0	1	16	58	130	70	14	4	2	0	1	311
10:00	10	1	2	0	4	24	59	73	42	9	2	1	0	0	227
DAY TOTAL	41	6	2	0	8	59	170	371	248	75	33	10	0	3	1026
PERCENTS	4.0%	0.6%	0.2%	0.0%	0.8%	5.8%	16.6%	36.2%	24.2%	7.3%	3.2%	1.0%	0.0%	0.3%	100.0%

Statistical Information...

15th Percentile Speed
37.1 mph

85th Percentile Speed
49.4 mph

Median Speed
43.3 mph

Average Speed
43.4 mph

10 MPH Pace Speed
40 mph to 50 mph
619 vehicles in pace
Representing 63.0% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA 8NB

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH
Lane: 1

File: D0501016.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
13:00	73	5	0	0	29	163	178	52	1	0	0	0	0	1	502
14:00	57	9	3	6	47	165	170	35	3	0	0	0	1	9	505
15:00	35	2	4	24	100	193	121	19	3	1	5	3	2	5	517
16:00	68	3	3	17	69	202	179	28	2	0	2	0	0	5	578
17:00	93	18	35	40	61	183	97	26	2	0	0	2	6	2	565
18:00	77	15	1	0	57	195	153	20	0	2	1	3	0	11	535
19:00	27	5	0	4	43	143	156	37	1	1	2	1	7	43	470
20:00	24	2	2	2	25	93	115	30	0	2	0	6	6	39	346
21:00	19	2	0	0	12	71	83	23	10	0	2	1	1	34	258
22:00	6	3	0	1	2	39	42	19	1	0	1	0	4	13	131
23:00	0	1	0	0	8	10	37	14	2	0	0	0	2	17	91
24:00	0	3	0	0	2	9	18	15	1	0	0	0	0	4	52
DAY TOTAL	479	68	48	94	455	1466	1349	318	26	6	13	16	29	183	4550
PERCENTS	10.5%	1.5%	1.1%	2.1%	10.0%	32.2%	29.6%	7.0%	0.6%	0.1%	0.3%	0.4%	0.6%	4.0%	100.0%

Statistical Information...

15th Percentile Speed
29.1 mph

85th Percentile Speed
39.4 mph

Median Speed
34.4 mph

Average Speed
34.3 mph

10 MPH Pace Speed
30 mph to 40 mph
2815 vehicles in pace
Representing 72.4% of the total vehicles

Vehicles > 65 MPH
29
0.7%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH
Lane: 1

File: D0501016.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	4	4	6	0	0	0	0	0	3	17
02:00	1	0	0	1	2	3	3	2	1	0	0	0	0	0	13
03:00	1	0	0	0	0	1	3	4	1	0	0	0	0	6	16
04:00	0	0	0	0	0	3	12	5	4	3	0	0	0	1	28
05:00	3	0	0	0	0	7	16	42	10	0	0	0	0	5	83
06:00	24	1	0	0	0	19	104	130	25	2	1	0	8	28	342
07:00	41	5	0	1	13	71	275	120	13	0	0	0	8	51	598
08:00	49	9	15	34	162	260	211	25	3	5	1	11	14	54	853
09:00	70	6	1	9	99	285	286	47	3	3	5	6	22	44	886
10:00	67	5	0	4	22	168	241	33	6	0	3	3	3	30	585
11:00	69	2	0	5	36	179	121	35	1	0	2	4	6	34	494
12:00	59	10	1	7	61	149	144	43	2	1	0	2	5	19	503
13:00	36	3	3	16	64	178	188	29	2	1	0	4	11	45	580
14:00	32	6	6	16	85	158	142	27	5	1	4	4	10	41	537
15:00	30	6	9	23	95	212	98	30	0	0	1	6	7	42	559
16:00	46	4	6	20	76	188	174	25	3	0	2	7	9	46	606
17:00	58	5	0	7	47	196	151	28	0	0	2	7	4	57	562
18:00	28	4	0	3	50	149	198	40	2	4	1	5	12	63	559
19:00	21	5	1	2	45	127	135	31	2	0	3	6	17	39	434
20:00	22	4	2	3	27	95	133	25	4	1	0	3	7	33	359
21:00	8	1	1	1	9	63	106	22	1	0	0	0	9	31	252
22:00	4	0	0	0	5	36	51	24	2	0	0	0	4	24	150
23:00	5	1	1	0	1	9	25	20	5	1	2	0	2	4	76
24:00	0	0	0	1	2	11	23	11	3	0	0	0	0	0	51
DAY TOTAL	674	77	46	153	901	2571	2844	804	98	22	27	68	158	700	9143
PERCENTS	7.4%	0.8%	0.5%	1.7%	9.9%	28.1%	31.1%	8.8%	1.1%	0.2%	0.3%	0.7%	1.7%	7.7%	100.0%

Statistical Information...

15th Percentile Speed
29.9 mph

85th Percentile Speed
40.1 mph

Median Speed
35.2 mph

Average Speed
35.6 mph

10 MPH Pace Speed
30 mph to 40 mph
5415 vehicles in pace
Representing 69.7% of the total vehicles

Vehicles > 65 MPH
158
2.0%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH
Lane: 1

File: D0501016.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	2	7	5	0	0	0	0	0	2	17
02:00	1	0	0	0	0	2	1	6	1	0	0	0	0	2	13
03:00	1	0	0	0	1	1	5	3	1	2	1	0	0	0	15
04:00	0	0	0	0	0	7	10	19	4	2	0	1	0	0	43
05:00	0	0	0	0	1	6	22	29	8	1	0	1	0	9	77
06:00	13	1	0	0	5	25	90	123	33	2	1	0	4	20	317
07:00	32	0	1	0	12	105	245	152	12	7	2	0	3	42	613
08:00	57	2	11	18	119	276	264	35	3	0	3	6	14	46	854
09:00	100	7	6	19	109	320	225	33	7	0	3	8	8	51	896
10:00	79	6	2	4	21	153	209	49	3	1	1	1	4	54	587
11:00	64	4	0	3	39	134	185	41	3	0	1	5	7	30	516
12:00	26	2	4	22	57	185	186	41	4	0	0	5	4	35	571
13:00	36	5	0	6	49	168	148	22	4	2	0	0	4	33	477
14:00	69	8	2	9	65	170	155	43	0	2	4	3	3	30	563
15:00	49	7	3	11	93	246	108	31	2	2	0	6	5	19	582
16:00	64	12	9	24	94	207	146	21	2	2	3	2	7	37	630
17:00	97	47	19	6	56	175	126	17	0	0	0	5	5	46	599
18:00	52	5	3	12	73	219	158	30	4	2	2	8	5	50	623
19:00	45	1	1	11	46	132	194	36	1	0	0	3	5	36	511
20:00	22	0	1	7	51	146	105	25	3	2	0	6	6	61	435
21:00	11	6	1	0	16	66	104	17	3	0	0	4	2	20	250
22:00	5	1	0	1	6	21	57	32	6	0	1	1	2	6	139
23:00	2	6	0	1	6	19	30	10	2	2	0	2	0	7	87
24:00	2	1	0	0	1	9	25	19	1	1	0	0	0	4	63
DAY TOTAL	827	121	63	154	921	2794	2805	839	107	30	22	67	88	640	9478
PERCENTS	8.7%	1.3%	0.7%	1.6%	9.7%	29.5%	29.6%	8.9%	1.1%	0.3%	0.2%	0.7%	0.9%	6.8%	100.0%

Statistical Information...

15th Percentile Speed
29.7 mph

85th Percentile Speed
39.9 mph

Median Speed
34.9 mph

Average Speed
35.1 mph

10 MPH Pace Speed
30 mph to 40 mph
5599 vehicles in pace
Representing 69.9% of the total vehicles

Vehicles > 65 MPH
88
1.1%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH
Lane: 1

File: D0501016.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	2	4	5	11	4	0	0	0	0	0	26
02:00	0	0	0	0	0	4	4	2	0	0	0	0	0	5	15
03:00	3	0	0	0	2	3	4	6	3	1	0	0	0	2	24
04:00	0	0	0	0	0	1	5	15	3	0	0	0	0	5	29
05:00	8	3	0	0	0	7	24	28	8	2	0	0	0	5	85
06:00	22	2	0	0	5	28	99	94	21	7	0	1	3	18	300
07:00	25	3	0	3	26	122	235	123	5	1	0	0	4	41	588
08:00	37	26	57	64	150	277	152	25	1	1	0	9	1	53	853
09:00	33	10	13	37	132	243	268	34	4	2	2	12	9	53	852
10:00	35	10	1	11	42	147	199	54	2	0	1	1	10	35	548
11:00	42	3	0	1	37	147	172	60	0	0	0	2	9	45	518
12:00	32	2	1	11	62	176	189	38	4	0	0	1	9	37	562
13:00	28	2	0	12	64	193	199	20	3	0	2	5	3	44	575
14:00	29	4	5	4	48	166	175	43	2	0	0	9	5	43	533
15:00	26	2	2	32	117	175	122	21	2	2	0	5	12	58	576
16:00	34	1	3	18	119	196	137	27	2	2	4	1	10	43	597
17:00	46	6	3	3	44	191	212	31	3	0	2	3	12	68	624
18:00	42	2	3	13	71	223	153	14	3	3	5	7	21	71	631
19:00	32	8	3	3	20	125	166	42	3	4	1	6	2	52	467
20:00	19	5	1	2	30	109	131	32	0	0	0	6	1	36	372
21:00	8	1	0	2	19	81	100	28	4	0	0	5	7	22	277
22:00	6	1	0	0	10	39	66	23	1	0	1	0	4	12	163
23:00	4	1	0	0	5	19	43	13	3	0	0	0	0	17	105
24:00	1	1	0	0	1	22	47	19	8	1	0	0	0	9	109
DAY TOTAL	512	93	92	216	1006	2698	2907	803	89	26	18	73	122	774	9429
PERCENTS	5.4%	1.0%	1.0%	2.3%	10.7%	28.6%	30.8%	8.5%	0.9%	0.3%	0.2%	0.8%	1.3%	8.2%	100.0%

Statistical Information...

15th Percentile Speed
29.1 mph

85th Percentile Speed
39.9 mph

Median Speed
34.9 mph

Average Speed
35.1 mph

10 MPH Pace Speed
30 mph to 40 mph
5605 vehicles in pace
Representing 68.8% of the total vehicles

Vehicles > 65 MPH
122
1.5%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000056
Site ID: 000000000801
Location: Route 37 NB, north of JW Leroy Jr. Way
Direction: NORTH
Lane: 1

File: D0501016.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	1	0	0	0	2	2	11	4	0	1	0	0	0	2	23
02:00	0	0	1	0	1	3	4	2	1	0	1	0	0	0	13
03:00	1	2	0	0	0	1	3	5	3	0	0	0	0	0	15
04:00	1	0	0	0	0	3	9	12	2	1	0	0	0	2	30
05:00	8	3	0	0	1	7	11	29	7	2	1	0	0	5	74
06:00	28	7	1	0	3	11	83	95	24	2	0	0	2	16	272
DAY TOTAL	39	12	2	0	7	27	121	147	37	6	2	0	2	25	427
PERCENTS	9.1%	2.8%	0.5%	0.0%	1.6%	6.3%	28.3%	34.4%	8.7%	1.4%	0.5%	0.0%	0.5%	5.9%	100.0%

Statistical Information...

15th Percentile Speed
35.3 mph

85th Percentile Speed
44.8 mph

Median Speed
40.4 mph

Average Speed
39.6 mph

10 MPH Pace Speed
35 mph to 45 mph
268 vehicles in pace
Representing 73.8% of the total vehicles

Vehicles > 65 MPH
2
0.6%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 8 SB

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH
Lane: 1

File: D0501018.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
13:00	1	3	0	0	19	156	297	102	17	2	1	0	0	0	598
14:00	0	1	3	9	52	201	252	68	8	0	2	1	0	0	597
15:00	3	13	42	42	111	209	189	34	3	0	0	0	1	2	649
16:00	6	11	29	23	184	312	200	45	5	0	0	0	0	4	819
17:00	2	7	18	12	125	382	244	58	10	0	0	0	0	6	864
18:00	4	2	6	11	103	336	286	67	5	0	1	0	0	16	837
19:00	6	0	0	11	57	182	232	81	8	2	1	0	0	17	597
20:00	2	0	0	3	38	102	155	95	10	3	0	0	2	14	424
21:00	0	0	1	1	8	123	153	42	12	1	0	0	0	4	345
22:00	0	1	0	1	7	35	81	39	10	3	0	0	0	6	183
23:00	0	0	0	0	3	21	33	40	12	0	0	0	0	0	109
24:00	0	0	0	1	1	6	21	26	6	0	0	0	0	0	61
DAY TOTAL	24	38	99	114	708	2065	2143	697	106	11	5	1	3	69	6083
PERCENTS	0.4%	0.6%	1.6%	1.9%	11.6%	33.9%	35.2%	11.5%	1.7%	0.2%	0.1%	0.0%	0.0%	1.1%	100.0%

Statistical Information...

15th Percentile Speed
29.6 mph

85th Percentile Speed
39.8 mph

Median Speed
34.9 mph

Average Speed
34.7 mph

10 MPH Pace Speed
30 mph to 40 mph
4208 vehicles in pace
Representing 70.3% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH
Lane: 1

File: D0501018.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	1	0	0	0	1	3	12	14	3	1	0	0	0	0	35
02:00	0	0	0	0	2	2	6	7	3	0	0	0	0	0	20
03:00	0	0	0	0	0	5	6	5	1	0	0	0	0	0	17
04:00	0	0	0	0	0	2	5	3	1	0	0	0	0	0	11
05:00	0	0	0	0	1	2	11	5	2	0	0	0	0	2	23
06:00	0	0	0	0	2	4	26	39	10	4	0	0	0	3	88
07:00	1	0	0	1	4	20	79	57	9	4	0	0	0	3	178
08:00	3	1	4	11	67	140	112	19	1	2	0	0	2	6	368
09:00	4	2	2	6	32	152	155	56	7	1	0	0	0	17	434
10:00	3	0	0	1	14	103	183	76	5	0	0	0	1	7	393
11:00	3	2	1	2	11	101	157	48	6	0	0	0	0	13	344
12:00	2	0	5	7	36	134	171	60	9	1	0	0	3	8	436
13:00	5	5	3	17	68	207	154	48	9	0	0	0	4	23	543
14:00	2	5	4	17	48	217	209	37	4	0	0	0	2	10	555
15:00	69	42	41	35	73	186	179	41	3	0	0	0	0	14	683
16:00	14	7	9	32	129	380	235	43	5	0	1	0	1	8	864
17:00	3	0	2	14	124	377	236	53	1	1	0	0	0	15	826
18:00	6	4	12	60	153	306	243	40	3	0	2	0	0	10	839
19:00	2	0	1	20	78	215	255	84	12	1	0	0	0	11	679
20:00	1	1	0	7	23	123	212	58	10	0	0	0	0	3	438
21:00	1	1	1	0	16	59	165	61	9	1	0	2	1	11	328
22:00	0	0	3	1	9	36	96	48	17	2	0	0	0	2	214
23:00	0	0	0	0	2	13	51	33	12	3	1	0	0	0	115
24:00	0	0	0	0	1	7	33	19	11	1	2	0	0	0	74
DAY TOTAL	120	70	88	231	894	2794	2991	954	153	22	6	2	14	166	8505
PERCENTS	1.4%	0.8%	1.0%	2.7%	10.5%	32.9%	35.2%	11.2%	1.8%	0.3%	0.1%	0.0%	0.2%	2.0%	100.0%

Statistical Information...

15th Percentile Speed
29.7 mph

85th Percentile Speed
39.9 mph

Median Speed
35.1 mph

Average Speed
34.8 mph

10 MPH Pace Speed
30 mph to 40 mph
5785 vehicles in pace
Representing 70.4% of the total vehicles

Vehicles > 65 MPH
14
0.2%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH
Lane: 1

File: D0501018.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	8	16	19	4	1	0	0	0	2	51
02:00	0	0	0	0	0	2	7	6	0	2	1	0	0	0	18
03:00	0	0	0	0	1	3	3	3	1	1	0	0	0	1	13
04:00	0	0	0	0	1	0	6	2	1	0	1	1	0	0	12
05:00	1	0	0	0	1	3	5	4	1	0	0	0	0	0	15
06:00	0	0	0	1	1	3	23	37	14	2	1	0	0	2	84
07:00	1	0	0	6	4	20	73	43	27	3	1	0	1	2	181
08:00	6	3	1	5	52	120	114	29	5	0	0	0	1	6	342
09:00	1	1	2	8	32	141	164	61	5	1	0	0	0	4	420
10:00	2	0	1	2	11	106	164	63	9	1	0	0	2	14	375
11:00	2	1	0	1	21	91	151	79	4	2	0	0	1	18	371
12:00	3	9	0	5	39	105	200	80	6	1	0	0	0	18	466
13:00	8	1	3	5	22	165	254	55	10	0	0	0	0	17	540
14:00	4	3	6	17	42	132	239	81	11	0	0	0	0	13	548
15:00	55	33	48	51	95	208	159	48	3	0	0	0	0	15	715
16:00	22	12	24	54	184	310	218	30	2	1	1	0	4	34	896
17:00	16	9	24	58	169	311	250	47	3	0	0	1	0	34	922
18:00	33	22	17	30	113	339	226	34	6	0	1	0	0	27	848
19:00	3	6	4	22	116	255	239	68	6	0	0	1	0	32	752
20:00	4	0	2	6	48	103	179	60	9	0	0	1	2	21	435
21:00	0	0	0	0	16	117	152	59	3	2	0	0	0	8	357
22:00	2	1	2	0	11	70	92	36	6	2	0	0	0	2	224
23:00	0	0	0	0	3	25	52	34	9	1	0	0	0	4	128
24:00	0	0	0	1	2	6	29	22	9	0	0	0	2	0	71
DAY TOTAL	163	101	134	272	985	2643	3015	1000	154	20	6	4	13	274	8784
PERCENTS	1.9%	1.1%	1.5%	3.1%	11.2%	30.1%	34.3%	11.4%	1.8%	0.2%	0.1%	0.0%	0.1%	3.1%	100.0%

Statistical Information...

15th Percentile Speed
28.8 mph

85th Percentile Speed
39.9 mph

Median Speed
35.1 mph

Average Speed
34.5 mph

10 MPH Pace Speed
30 mph to 40 mph
5658 vehicles in pace
Representing 67.8% of the total vehicles

Vehicles > 65 MPH
13
0.2%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH
Lane: 1

File: D0501018.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	2	7	10	11	5	3	0	0	0	2	40
02:00	0	0	0	0	1	3	4	4	0	0	0	0	0	0	12
03:00	0	0	0	0	1	3	5	4	0	1	0	0	1	1	16
04:00	0	0	0	0	0	2	3	4	1	1	0	0	0	0	11
05:00	0	0	0	0	1	1	11	1	5	0	1	0	0	0	20
06:00	0	0	0	0	3	7	29	33	9	1	0	0	0	2	84
07:00	2	1	1	2	11	27	84	41	15	0	1	2	0	2	189
08:00	6	1	3	17	62	138	102	31	2	0	0	2	5	18	387
09:00	2	0	1	4	29	117	180	69	7	2	1	2	0	7	421
10:00	6	0	2	0	16	92	149	59	8	0	0	2	0	21	355
11:00	1	1	1	2	13	102	176	65	9	1	1	0	0	11	383
12:00	6	0	0	0	20	123	193	58	9	0	1	0	1	10	421
13:00	2	1	0	0	28	132	209	84	8	0	1	1	3	15	484
14:00	0	1	0	19	81	149	219	66	3	1	0	0	5	14	558
15:00	39	26	34	57	135	209	174	16	2	1	0	0	2	18	713
16:00	58	25	17	43	176	262	208	43	3	0	0	2	1	25	863
17:00	92	47	63	54	97	227	200	31	6	0	0	3	1	13	834
18:00	237	137	110	60	74	103	36	6	0	1	0	1	4	6	775
19:00	6	3	5	5	62	235	221	62	4	1	0	0	4	31	639
20:00	4	0	0	2	9	113	178	79	12	1	2	0	3	15	418
21:00	1	1	0	1	18	132	157	56	6	1	0	0	0	8	381
22:00	0	0	0	2	5	63	132	53	4	3	0	0	1	11	274
23:00	0	0	0	1	4	36	63	56	11	0	0	0	2	3	176
24:00	0	0	0	0	1	13	24	32	4	1	0	0	0	0	75
DAY TOTAL	462	244	237	269	849	2296	2767	964	133	19	8	15	33	233	8529
PERCENTS	5.4%	2.9%	2.8%	3.2%	10.0%	26.9%	32.4%	11.3%	1.6%	0.2%	0.1%	0.2%	0.4%	2.7%	100.0%

Statistical Information...

15th Percentile Speed
27.5 mph

85th Percentile Speed
40.0 mph

Median Speed
35.0 mph

Average Speed
34.1 mph

10 MPH Pace Speed
30 mph to 40 mph
5063 vehicles in pace
Representing 64.6% of the total vehicles

Vehicles > 65 MPH
33
0.4%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000125
Site ID: 000000000802
Location: Route 37 SB, north of JW Leroy Jr. Way
Direction: SOUTH
Lane: 1

File: D0501018.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	4	18	21	6	3	0	0	0	1	53
02:00	0	0	0	0	0	3	7	3	4	0	1	0	0	0	18
03:00	0	0	0	0	0	2	3	5	1	0	0	0	0	0	11
04:00	0	0	0	0	0	1	2	3	1	0	2	0	0	0	9
05:00	1	0	0	0	1	1	12	8	1	0	0	0	0	0	24
06:00	0	0	0	0	1	7	23	20	11	1	1	0	0	0	64
07:00	1	1	1	4	2	30	79	45	5	3	0	0	0	2	173
08:00	3	3	7	25	51	150	117	34	2	0	0	4	3	12	411
09:00	2	0	0	14	31	128	175	35	3	0	6	0	2	25	421
10:00	2	0	0	3	13	93	158	62	11	1	0	0	1	16	360
DAY TOTAL	9	4	8	46	99	419	594	236	45	8	10	4	6	56	1544
PERCENTS	0.6%	0.3%	0.5%	3.0%	6.4%	27.1%	38.5%	15.3%	2.9%	0.5%	0.6%	0.3%	0.4%	3.6%	100.0%

Statistical Information...

15th Percentile Speed
30.8 mph

85th Percentile Speed
41.9 mph

Median Speed
36.4 mph

Average Speed
36.3 mph

10 MPH Pace Speed
30 mph to 40 mph
1013 vehicles in pace
Representing 68.5% of the total vehicles

Vehicles > 65 MPH
6
0.4%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 13 NB

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH
Lane: 1

File: D0501022.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
14:00	1	0	0	5	25	60	184	193	101	21	8	1	1	0	600
15:00	4	2	6	26	51	130	212	146	96	17	4	1	0	0	695
16:00	4	1	10	13	52	135	218	170	110	37	2	0	0	0	752
17:00	1	0	12	29	64	107	182	212	120	27	9	2	0	1	766
18:00	1	3	6	28	66	111	157	187	114	42	11	0	0	0	726
19:00	0	1	0	7	15	51	132	172	123	42	12	2	0	0	557
20:00	2	0	0	3	12	32	122	138	111	34	10	2	1	0	467
21:00	0	0	0	0	9	18	96	102	69	21	5	0	0	1	321
22:00	0	0	0	1	3	7	32	81	51	20	6	4	0	0	205
23:00	0	0	0	0	1	4	16	47	42	11	11	0	0	0	132
24:00	0	0	0	0	0	15	22	25	13	11	4	0	1	0	91
DAY TOTAL	13	7	34	112	298	670	1373	1473	950	283	82	12	3	2	5312
PERCENTS	0.2%	0.1%	0.6%	2.1%	5.6%	12.6%	25.8%	27.7%	17.9%	5.3%	1.5%	0.2%	0.1%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
32.6 mph

85th Percentile Speed
47.8 mph

Median Speed
40.5 mph

Average Speed
40.2 mph

10 MPH Pace Speed
35 mph to 45 mph
2846 vehicles in pace
Representing 53.7% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH
Lane: 1

File: D0501022.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	0	8	7	10	4	5	0	1	1	36
02:00	0	0	0	0	1	0	0	7	5	2	1	0	0	0	16
03:00	0	0	0	0	0	0	0	6	8	5	2	3	1	0	25
04:00	0	0	0	0	0	0	2	10	16	12	8	2	1	1	52
05:00	0	0	0	1	1	0	3	37	65	57	22	6	3	2	197
06:00	0	1	0	0	0	5	37	88	235	169	70	8	1	0	614
07:00	5	4	1	6	17	29	138	320	270	95	26	4	2	1	918
08:00	5	11	12	83	132	243	329	259	80	13	5	0	0	0	1172
09:00	31	30	72	94	117	183	253	240	89	9	0	1	0	0	1119
10:00	0	0	2	2	11	71	201	230	148	21	5	1	0	0	692
11:00	0	0	0	3	9	37	156	259	123	25	7	2	0	0	621
12:00	0	0	0	5	28	65	188	164	102	19	5	0	0	0	576
13:00	0	2	0	3	25	136	184	186	77	14	2	0	0	0	629
14:00	0	2	3	8	38	84	195	184	72	15	5	1	0	0	607
15:00	3	1	7	16	59	119	198	158	91	16	4	0	0	0	672
16:00	0	0	6	23	69	141	192	182	81	22	4	1	0	0	721
17:00	2	8	7	25	72	107	195	173	96	16	5	1	0	0	707
18:00	4	0	4	24	67	131	172	148	82	19	3	2	0	0	656
19:00	0	2	0	2	13	54	121	164	106	37	4	1	0	1	505
20:00	3	0	0	2	12	67	128	141	65	20	4	1	0	0	443
21:00	1	0	0	1	1	16	55	99	65	26	4	2	0	1	271
22:00	0	0	0	1	0	12	45	88	60	22	9	0	0	0	237
23:00	0	0	0	3	7	13	20	33	43	17	7	3	0	0	146
24:00	0	0	0	0	3	11	19	23	20	4	1	0	0	0	81
DAY TOTAL	54	61	114	302	682	1524	2839	3206	2009	659	208	39	9	7	11713
PERCENTS	0.5%	0.5%	1.0%	2.6%	5.8%	13.0%	24.2%	27.4%	17.2%	5.6%	1.8%	0.3%	0.1%	0.1%	100.0%

Statistical Information...

15th Percentile Speed
31.9 mph

85th Percentile Speed
47.9 mph

Median Speed
40.5 mph

Average Speed
40.0 mph

10 MPH Pace Speed
35 mph to 45 mph
6045 vehicles in pace
Representing 51.9% of the total vehicles

Vehicles > 65 MPH
9
0.1%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH
Lane: 1

File: D0501022.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	2	0	8	14	5	4	2	0	0	35
02:00	0	0	0	1	1	0	0	7	6	6	4	0	0	0	25
03:00	0	0	0	0	0	0	2	6	10	7	5	3	0	1	34
04:00	0	0	0	0	0	0	1	11	13	19	10	5	0	2	61
05:00	0	0	0	1	1	1	5	25	42	56	27	13	0	2	173
06:00	0	1	0	0	0	4	10	118	285	144	44	9	1	0	616
07:00	4	0	4	1	20	47	138	325	288	92	21	2	1	0	943
08:00	84	104	196	197	120	108	168	158	59	5	3	0	0	0	1202
09:00	38	36	84	59	93	145	248	245	96	15	3	1	0	0	1063
10:00	0	1	4	5	17	70	195	251	135	19	7	0	0	0	704
11:00	0	1	6	4	14	44	213	247	117	16	3	0	0	0	665
12:00	0	1	0	1	13	49	179	246	113	20	1	0	0	0	623
13:00	0	0	0	2	40	93	166	192	118	25	9	2	0	0	647
14:00	0	0	0	7	29	66	171	164	133	26	3	0	0	0	599
15:00	6	3	5	27	49	118	184	183	101	20	5	0	0	0	701
16:00	7	10	5	14	53	127	249	155	87	16	4	0	0	2	729
17:00	0	0	0	23	58	191	183	197	96	26	8	1	0	0	783
18:00	1	3	1	14	69	124	208	193	97	24	4	1	0	0	739
19:00	0	0	2	16	44	66	140	181	98	24	8	0	0	1	580
20:00	2	0	0	1	11	49	129	163	87	30	4	0	1	0	477
21:00	0	0	0	2	13	31	92	95	45	13	9	2	1	0	303
22:00	0	0	0	0	2	13	98	77	22	8	3	0	0	2	225
23:00	0	0	1	0	3	15	50	53	22	7	0	1	0	0	152
24:00	0	0	0	0	2	14	34	35	11	3	0	0	0	0	99
DAY TOTAL	142	160	308	375	652	1377	2863	3335	2095	626	189	42	4	10	12178
PERCENTS	1.2%	1.3%	2.5%	3.1%	5.4%	11.3%	23.5%	27.4%	17.2%	5.1%	1.6%	0.3%	0.0%	0.1%	100.0%

Statistical Information...

15th Percentile Speed
31.1 mph

85th Percentile Speed
47.8 mph

Median Speed
40.4 mph

Average Speed
39.4 mph

10 MPH Pace Speed
35 mph to 45 mph
6198 vehicles in pace
Representing 51.5% of the total vehicles

Vehicles > 65 MPH
4
0.0%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH
Lane: 1

File: D0501022.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	2	8	20	13	4	1	1	0	0	50
02:00	0	0	0	0	0	0	6	6	2	2	0	0	0	0	16
03:00	0	0	0	0	0	2	7	12	4	1	1	1	0	0	28
04:00	0	0	0	0	1	0	11	17	13	12	6	3	0	0	63
05:00	0	0	0	0	1	7	37	58	42	30	4	3	0	0	182
06:00	0	1	0	4	12	69	182	205	86	27	3	0	0	0	589
07:00	6	7	0	19	139	225	330	139	37	3	3	0	0	0	908
08:00	3	8	31	129	223	310	296	55	8	2	1	0	0	0	1066
09:00	19	20	34	124	288	283	160	61	11	3	1	0	0	0	1004
10:00	0	0	3	14	66	196	308	122	23	3	0	1	0	0	736
11:00	0	0	4	12	38	126	263	119	33	4	1	0	0	0	600
12:00	2	4	1	14	64	182	219	116	27	4	0	0	0	0	633
13:00	1	0	0	15	62	193	222	105	26	3	2	0	0	0	629
14:00	2	0	9	5	44	119	216	135	35	11	2	0	0	0	578
15:00	2	1	23	52	99	170	221	119	27	4	2	0	0	0	720
16:00	12	14	34	71	129	215	193	61	31	3	4	1	0	0	768
17:00	1	0	2	42	92	174	195	118	76	12	1	0	0	0	713
18:00	5	2	6	45	139	188	207	142	56	7	1	0	0	1	799
19:00	0	0	0	6	39	114	156	150	77	13	4	0	0	1	560
20:00	3	0	1	9	49	123	181	88	38	8	2	0	0	0	502
21:00	1	0	0	7	30	50	127	94	39	6	4	0	0	0	358
22:00	0	0	0	2	13	30	112	71	38	8	4	1	0	1	280
23:00	0	0	0	0	1	13	47	41	31	8	5	1	0	0	147
24:00	0	0	0	0	2	18	35	32	16	4	1	0	0	1	109
DAY TOTAL	57	57	148	570	1532	2809	3739	2086	789	182	53	12	0	4	12038
PERCENTS	0.5%	0.5%	1.2%	4.7%	12.7%	23.3%	31.1%	17.3%	6.6%	1.5%	0.4%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
28.3 mph

85th Percentile Speed
43.2 mph

Median Speed
36.2 mph

Average Speed
35.8 mph

10 MPH Pace Speed
30 mph to 40 mph
6548 vehicles in pace
Representing 54.7% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Fri 5/5/2023

Station #: 230200000017
Site ID: 000000001301
Location: Route 37 NB, north of Braxton St.
Direction: NORTH
Lane: 1

File: D0501022.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	2	4	7	11	1	1	0	0	0	26
02:00	0	0	0	0	1	3	3	3	6	5	1	1	0	0	23
03:00	0	0	0	0	0	0	2	18	6	1	0	0	1	1	29
04:00	0	0	0	0	0	1	10	19	11	7	4	1	0	0	53
05:00	0	0	0	1	1	4	28	55	63	13	9	2	2	0	178
06:00	0	1	0	0	22	66	138	175	111	38	6	0	0	0	557
07:00	3	0	0	12	69	212	314	164	28	2	4	0	0	0	808
08:00	1	0	11	52	158	368	329	101	13	3	0	0	0	0	1036
09:00	4	3	14	52	125	258	280	160	38	2	2	0	0	0	938
10:00	2	3	3	12	43	76	199	232	87	20	5	1	0	0	683
DAY TOTAL	10	7	28	129	419	990	1307	934	374	92	32	5	3	1	4331
PERCENTS	0.2%	0.2%	0.6%	3.0%	9.7%	22.9%	30.2%	21.6%	8.6%	2.1%	0.7%	0.1%	0.1%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
30.3 mph

85th Percentile Speed
44.2 mph

Median Speed
37.3 mph

Average Speed
37.2 mph

10 MPH Pace Speed
30 mph to 40 mph
2297 vehicles in pace
Representing 53.2% of the total vehicles

Vehicles > 65 MPH
3
0.1%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 135B

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH
Lane: 1

File: D0501024.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
14:00	18	22	22	59	94	116	221	138	28	3	1	0	0	0	722
15:00	66	55	86	138	177	180	164	54	12	1	0	0	0	0	933
16:00	58	76	97	143	225	173	148	72	7	3	0	0	0	1	1003
17:00	97	99	134	205	218	210	150	36	3	1	1	0	0	0	1154
18:00	101	99	112	213	275	226	141	36	1	1	0	0	0	0	1205
19:00	43	53	52	79	101	154	269	156	20	0	0	0	0	0	927
20:00	7	11	17	43	132	128	207	171	20	6	1	0	0	0	743
21:00	6	12	9	21	38	87	181	145	31	2	4	0	0	0	536
22:00	0	0	3	1	7	29	111	123	61	7	3	3	1	0	349
23:00	0	0	1	4	5	18	46	68	48	8	3	1	0	0	202
24:00	0	0	0	1	10	10	34	73	29	13	1	1	1	0	173
DAY TOTAL	396	427	533	907	1282	1331	1672	1072	260	45	14	5	2	1	7947
PERCENTS	5.0%	5.4%	6.7%	11.4%	16.1%	16.7%	21.0%	13.5%	3.3%	0.6%	0.2%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
21.0 mph

85th Percentile Speed
41.2 mph

Median Speed
32.4 mph

Average Speed
31.5 mph

10 MPH Pace Speed
30 mph to 40 mph
3003 vehicles in pace
Representing 39.8% of the total vehicles

Vehicles > 65 MPH
2
0.0%

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH
Lane: 1

File: D0501024.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	1	0	2	12	36	27	8	2	2	0	0	90
02:00	0	0	0	0	1	2	6	12	12	2	3	1	0	0	39
03:00	0	0	0	0	1	1	2	9	10	2	1	0	0	0	26
04:00	0	0	0	0	0	2	2	5	4	2	2	1	0	0	18
05:00	0	0	0	0	1	0	7	9	11	10	2	1	0	0	41
06:00	0	0	0	0	2	8	28	50	34	7	3	2	0	0	134
07:00	0	0	0	6	22	33	61	98	41	9	2	0	0	0	272
08:00	8	12	15	33	51	98	187	128	26	5	0	0	1	0	564
09:00	12	20	22	49	53	97	203	112	13	3	1	0	0	0	585
10:00	2	1	8	12	40	78	189	113	28	4	0	0	0	0	475
11:00	2	1	10	11	49	112	166	113	38	3	1	0	0	0	506
12:00	3	2	13	32	72	146	189	119	17	0	1	0	0	0	594
13:00	1	4	27	66	100	144	196	72	12	1	0	0	0	0	623
14:00	11	23	35	41	90	172	217	98	19	0	0	0	0	0	706
15:00	67	58	75	114	206	154	166	73	13	1	0	0	0	0	927
16:00	89	85	117	149	189	194	162	63	8	1	0	0	0	0	1057
17:00	124	88	127	198	283	193	90	11	0	0	0	0	0	0	1114
18:00	108	86	146	179	262	164	106	28	1	0	0	0	0	0	1080
19:00	48	29	60	91	184	199	234	87	19	4	0	0	0	0	955
20:00	18	11	22	67	92	114	242	115	18	3	1	0	0	0	703
21:00	4	7	11	39	58	72	157	152	21	5	1	3	0	0	530
22:00	0	0	2	12	10	51	108	151	33	7	3	0	0	0	377
23:00	0	0	4	2	10	22	61	75	35	14	3	2	0	0	228
24:00	0	0	0	3	2	13	45	57	38	11	4	2	0	0	175
DAY TOTAL	497	427	694	1105	1778	2071	2836	1786	478	102	30	14	1	0	11819
PERCENTS	4.2%	3.6%	5.9%	9.3%	15.0%	17.5%	24.0%	15.1%	4.0%	0.9%	0.3%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
22.6 mph

85th Percentile Speed
42.0 mph

Median Speed
34.0 mph

Average Speed
32.8 mph

10 MPH Pace Speed
30 mph to 40 mph
4907 vehicles in pace
Representing 43.3% of the total vehicles

Vehicles > 65 MPH
1
0.0%

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH
Lane: 1

File: D0501024.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	2	15	37	21	10	6	0	0	0	92
02:00	0	0	0	0	1	1	8	20	10	3	1	1	0	0	45
03:00	0	0	0	0	0	0	4	9	10	3	1	1	0	1	29
04:00	0	0	0	0	1	1	7	7	3	3	2	0	0	1	25
05:00	0	0	0	0	2	1	3	12	12	5	4	1	0	0	40
06:00	1	0	0	0	2	8	17	51	30	3	2	2	0	0	116
07:00	0	2	0	1	13	32	71	125	43	17	3	2	0	0	309
08:00	5	6	9	18	38	90	200	144	35	1	0	0	0	0	546
09:00	7	9	9	32	34	92	236	126	21	1	0	0	0	0	567
10:00	4	3	18	29	38	92	171	135	30	3	0	0	0	0	523
11:00	0	0	6	24	52	89	181	129	24	5	3	0	0	0	513
12:00	5	9	22	39	68	104	186	122	31	10	0	0	0	0	596
13:00	14	13	22	47	68	115	233	131	31	1	2	1	0	0	678
14:00	25	27	39	48	81	108	241	147	31	6	0	0	0	0	753
15:00	59	87	124	126	132	150	186	100	11	2	0	0	0	0	977
16:00	139	135	145	200	178	139	124	26	0	1	0	0	0	0	1087
17:00	109	132	178	176	224	156	80	42	6	1	2	0	0	0	1106
18:00	132	92	116	199	308	197	109	29	7	2	0	0	0	0	1191
19:00	71	61	76	138	143	140	219	126	21	4	0	0	0	0	999
20:00	8	21	35	68	111	172	237	120	23	3	0	0	0	0	798
21:00	4	14	20	35	80	108	203	111	24	2	0	1	0	0	602
22:00	16	11	21	25	66	97	89	76	11	0	0	0	0	0	412
23:00	0	0	6	6	33	42	50	61	17	1	0	0	0	1	217
24:00	0	1	1	11	24	51	55	46	19	1	1	0	0	0	210
DAY TOTAL	599	623	847	1222	1698	1987	2925	1932	471	88	27	9	0	3	12431
PERCENTS	4.8%	5.0%	6.8%	9.8%	13.7%	16.0%	23.5%	15.5%	3.8%	0.7%	0.2%	0.1%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
21.3 mph

85th Percentile Speed
42.0 mph

Median Speed
33.8 mph

Average Speed
32.3 mph

10 MPH Pace Speed
30 mph to 40 mph
4912 vehicles in pace
Representing 41.5% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH
Lane: 1

File: D0501024.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	7	20	28	29	13	3	0	0	0	0	100
02:00	0	0	0	2	6	8	11	14	5	1	2	0	0	0	49
03:00	0	0	0	0	3	3	10	6	3	1	2	3	0	0	31
04:00	0	0	0	1	3	4	3	3	3	1	0	0	0	0	18
05:00	0	0	1	0	5	7	10	9	5	2	3	0	0	0	42
06:00	0	0	0	3	15	16	39	31	13	3	1	0	0	0	121
07:00	4	0	6	16	48	64	89	61	18	3	3	1	0	0	313
08:00	17	24	23	54	83	129	122	76	16	4	1	0	0	0	549
09:00	54	40	56	75	98	89	142	55	12	1	3	0	1	0	626
10:00	16	21	25	51	101	112	106	40	14	1	1	0	0	0	488
11:00	7	11	25	56	98	108	133	52	2	2	0	0	0	0	494
12:00	26	24	47	79	98	106	115	43	6	1	0	0	0	0	545
13:00	73	46	69	102	97	135	99	32	2	0	0	0	0	0	655
14:00	56	51	80	95	115	107	123	47	4	1	0	0	0	0	679
15:00	121	90	96	222	178	91	69	19	2	0	0	0	0	0	888
16:00	185	115	164	247	165	52	14	3	0	0	0	0	0	0	945
17:00	170	150	160	267	219	71	13	3	0	0	0	0	0	0	1053
18:00	187	115	252	241	149	40	4	0	0	0	0	0	0	0	988
19:00	163	136	179	270	180	71	19	5	0	0	0	0	0	0	1023
20:00	171	104	114	174	143	75	59	19	4	0	0	0	0	0	863
21:00	18	19	52	69	104	133	148	47	6	0	0	1	0	0	597
22:00	4	4	14	38	76	110	107	63	12	1	1	0	0	0	430
23:00	0	0	2	15	50	83	84	47	10	2	0	0	0	0	293
24:00	0	0	2	19	35	49	60	44	12	6	0	0	0	0	227
DAY TOTAL	1272	950	1367	2096	2076	1683	1607	748	162	33	17	5	1	0	12017
PERCENTS	10.6%	7.9%	11.4%	17.4%	17.3%	14.0%	13.4%	6.2%	1.3%	0.3%	0.1%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed
17.4 mph

85th Percentile Speed
38.0 mph

Median Speed
27.3 mph

Average Speed
27.7 mph

10 MPH Pace Speed
20 mph to 30 mph
4172 vehicles in pace
Representing 38.8% of the total vehicles

Vehicles > 65 MPH
1
0.0%

Station #: 230200000102
Site ID: 000000001302
Location: Route 37 SB, north of Braxton St.
Direction: SOUTH
Lane: 1

File: D0501024.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	1	4	13	12	33	30	11	4	1	0	0	0	109
02:00	0	0	1	2	4	11	7	15	4	0	0	0	0	0	44
03:00	0	0	1	3	4	4	7	4	3	0	1	1	0	4	32
04:00	0	0	0	1	1	5	5	5	5	0	0	0	0	0	22
05:00	0	0	1	1	9	7	10	8	5	2	0	0	0	0	43
06:00	0	0	0	0	11	17	34	29	12	2	0	0	0	0	105
07:00	7	6	9	15	36	70	86	64	8	3	2	0	0	0	306
08:00	19	15	15	41	86	113	133	85	18	1	2	0	0	0	528
09:00	23	23	23	58	101	134	115	49	13	1	0	0	0	0	540
10:00	0	3	2	22	67	120	145	100	22	2	0	0	0	0	483
DAY TOTAL	49	47	53	147	332	493	575	389	101	15	6	1	0	4	2212
PERCENTS	2.2%	2.1%	2.4%	6.6%	15.0%	22.3%	26.0%	17.6%	4.6%	0.7%	0.3%	0.0%	0.0%	0.2%	100.0%

Statistical Information...

15th Percentile Speed
26.2 mph

85th Percentile Speed
42.4 mph

Median Speed
35.1 mph

Average Speed
34.3 mph

10 MPH Pace Speed
30 mph to 40 mph
1068 vehicles in pace
Representing 49.5% of the total vehicles

Vehicles > 65 MPH
0
0.0%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 18 NB

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH
Lane: 1

File: D0501031.prn
City: Braintree
County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
15:00	138	101	81	20	4	3	6	20	7	18	38	8	0	4	448
16:00	187	87	82	35	7	6	9	16	10	13	37	8	0	4	501
17:00	151	75	109	13	10	2	11	23	10	20	52	4	0	13	493
18:00	137	51	76	32	15	1	5	4	20	13	48	29	0	1	432
19:00	103	53	43	29	14	4	6	12	20	26	61	25	0	5	401
20:00	43	57	80	21	8	4	6	10	11	18	61	18	0	7	344
21:00	15	32	57	27	7	6	1	4	13	14	36	12	0	6	230
22:00	8	18	24	29	1	0	1	3	2	10	16	4	0	10	126
23:00	7	7	22	15	6	2	0	2	1	10	21	5	0	2	100
24:00	1	6	6	9	6	2	0	4	0	7	16	3	0	1	61
DAY TOTAL	790	487	580	230	78	30	45	98	94	149	386	116	0	53	3136
PERCENTS	25.2%	15.5%	18.5%	7.3%	2.5%	1.0%	1.4%	3.1%	3.0%	4.8%	12.3%	3.7%	0.0%	1.7%	100.0%

Statistical Information...

15th Percentile Speed
33.5 mph

85th Percentile Speed
77.1 mph

Median Speed
41.7 mph

Average Speed
51.5 mph

10 MPH Pace Speed
30 mph to 40 mph
1067 vehicles in pace
Representing 46.5% of the total vehicles

Vehicles > 65 MPH
745
32.5%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH
Lane: 1

File: D0501031.prn
City: Braintree
County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	0	4	4	10	0	1	0	0	0	0	8	4	0	0	31
02:00	0	0	6	1	1	1	0	0	0	0	0	0	0	1	10
03:00	1	0	1	5	5	1	1	0	0	4	4	0	0	4	26
04:00	2	0	5	9	7	3	6	1	1	2	2	8	0	2	48
05:00	10	9	23	39	36	8	4	2	1	4	15	5	0	9	165
06:00	139	41	57	84	28	6	8	13	12	16	94	22	0	6	526
07:00	369	85	60	56	12	9	4	23	21	37	72	10	0	5	763
08:00	512	67	54	22	19	7	4	31	18	31	37	12	0	1	815
09:00	398	92	63	32	11	9	15	14	14	26	48	16	0	0	738
10:00	174	109	80	25	13	1	4	16	16	23	42	15	0	2	520
11:00	148	78	70	31	18	3	1	12	7	13	38	7	0	4	430
12:00	88	68	66	30	22	0	10	14	14	26	67	9	0	1	415
13:00	144	58	84	25	13	7	14	21	21	34	67	11	0	2	501
14:00	87	72	77	27	5	5	2	11	18	20	74	23	0	4	425
15:00	136	64	71	28	5	4	3	18	11	39	73	7	0	6	465
16:00	184	72	59	26	7	4	3	13	19	31	60	7	0	5	490
17:00	147	68	76	41	4	3	7	21	17	18	71	20	0	0	493
18:00	104	64	54	29	10	1	5	13	13	29	108	17	0	3	450
19:00	72	34	78	45	7	7	3	7	25	21	59	19	0	8	385
20:00	50	44	52	40	17	4	3	8	11	27	68	18	0	5	347
21:00	21	29	27	29	15	2	2	5	2	14	49	10	0	4	209
22:00	10	14	27	38	9	0	2	2	2	10	38	18	0	6	176
23:00	14	3	29	17	3	3	1	2	3	8	37	15	0	6	141
24:00	1	2	4	11	4	0	0	0	0	2	6	4	0	2	36
DAY TOTAL	2811	1077	1127	700	271	89	102	247	246	435	1137	277	0	86	8605
PERCENTS	32.7%	12.5%	13.1%	8.1%	3.1%	1.0%	1.2%	2.9%	2.9%	5.1%	13.2%	3.2%	0.0%	1.0%	100.0%

Statistical Information...

15th Percentile Speed
34.0 mph

85th Percentile Speed
77.5 mph

Median Speed
44.7 mph

Average Speed
53.4 mph

10 MPH Pace Speed
30 mph to 40 mph
2204 vehicles in pace
Representing 38.6% of the total vehicles

Vehicles > 65 MPH
2095
36.7%

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH
Lane: 1

File: D0501031.prn
City: Braintree
County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	2	0	5	2	6	2	0	0	2	2	5	2	0	2	30
02:00	1	0	4	2	2	1	0	2	0	0	2	5	0	0	19
03:00	0	0	8	10	3	1	0	0	0	2	0	0	0	2	26
04:00	4	0	6	12	7	2	1	2	0	0	7	4	0	2	47
05:00	11	4	11	40	27	14	3	2	2	0	14	7	0	9	144
06:00	128	36	64	87	38	17	4	8	14	12	107	11	0	10	536
07:00	311	93	100	49	20	5	12	16	17	30	91	17	0	2	763
08:00	472	84	73	28	13	6	7	31	12	33	63	11	0	1	834
09:00	401	90	85	20	9	11	21	24	12	33	70	9	0	1	786
10:00	175	76	92	37	11	2	6	16	5	24	73	23	0	6	546
11:00	165	87	74	21	10	7	10	9	21	26	60	16	0	3	509
12:00	110	77	61	33	9	5	5	11	13	22	88	7	0	12	453
13:00	130	71	68	32	11	8	8	14	27	25	60	14	0	3	471
14:00	101	81	79	19	11	7	5	6	11	24	58	15	0	3	420
15:00	143	74	56	30	19	3	8	16	16	37	59	8	0	2	471
16:00	140	80	77	26	18	7	5	31	31	25	70	14	0	4	528
17:00	117	78	95	28	14	4	11	15	14	22	95	25	0	9	527
18:00	152	62	82	37	22	4	13	19	10	27	67	19	0	5	519
19:00	90	60	55	28	12	8	6	15	16	21	58	12	0	7	388
20:00	73	60	46	32	3	3	2	5	21	27	56	18	0	2	348
21:00	27	29	39	23	8	1	4	2	10	18	49	11	0	11	232
22:00	17	14	39	30	7	0	1	0	2	10	41	23	0	4	188
23:00	10	5	18	27	4	1	0	1	0	12	23	8	0	1	110
24:00	1	6	15	8	2	0	0	0	0	2	12	9	0	1	56
DAY TOTAL	2781	1167	1252	661	286	119	132	245	256	434	1228	288	0	102	8951
PERCENTS	31.1%	13.0%	14.0%	7.4%	3.2%	1.3%	1.5%	2.7%	2.9%	4.8%	13.7%	3.2%	0.0%	1.1%	100.0%

Statistical Information...

15th Percentile Speed
33.9 mph

85th Percentile Speed
77.5 mph

Median Speed
44.7 mph

Average Speed
53.3 mph

10 MPH Pace Speed
30 mph to 40 mph
2419 vehicles in pace
Representing 39.9% of the total vehicles

Vehicles > 65 MPH
2206
36.4%

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH
Lane: 1

File: D0501031.prn
City: Braintree
County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	1	2	6	7	4	1	0	0	0	0	9	6	0	1	37
02:00	0	2	3	3	1	1	0	0	0	0	0	2	0	0	12
03:00	0	2	2	11	2	0	0	0	0	0	4	2	0	0	23
04:00	0	1	0	13	6	15	3	0	2	0	9	4	0	2	55
05:00	16	9	16	38	29	15	1	2	0	6	19	7	0	2	160
06:00	122	51	40	80	39	7	8	6	13	33	70	28	0	20	517
07:00	380	100	69	37	17	9	2	9	16	27	67	22	0	0	755
08:00	589	43	45	12	1	3	6	15	7	12	26	8	0	0	767
09:00	527	62	35	15	7	3	6	19	12	12	30	4	0	0	732
10:00	186	98	89	25	8	1	11	17	24	36	120	16	0	4	635
11:00	103	74	81	30	9	10	2	20	21	18	100	18	0	0	486
12:00	75	59	115	35	4	8	6	10	23	46	69	28	0	1	479
13:00	129	80	87	32	5	3	6	17	18	32	71	8	0	6	494
14:00	96	78	82	43	7	2	6	19	27	35	70	14	0	2	481
15:00	178	56	76	18	10	3	3	18	19	31	71	14	0	0	497
16:00	156	66	63	36	15	3	15	13	23	34	70	14	0	3	511
17:00	157	68	76	51	5	1	15	11	12	25	79	24	0	4	528
18:00	156	72	79	34	11	7	2	19	11	24	88	30	0	3	536
19:00	69	51	69	37	5	6	7	6	17	23	72	19	0	9	390
20:00	59	52	47	43	5	1	8	11	11	26	83	14	0	1	361
21:00	32	28	54	26	9	2	1	2	5	11	77	12	0	7	266
22:00	23	9	41	31	7	4	1	3	2	8	47	12	0	12	200
23:00	5	5	31	24	9	4	2	0	0	3	6	2	0	5	96
24:00	7	3	11	8	7	3	2	0	0	8	10	0	0	0	59
DAY TOTAL	3066	1071	1217	689	222	112	113	217	263	450	1267	308	0	82	9077
PERCENTS	33.8%	11.8%	13.4%	7.6%	2.4%	1.2%	1.2%	2.4%	2.9%	5.0%	14.0%	3.4%	0.0%	0.9%	100.0%

Statistical Information...

15th Percentile Speed
34.2 mph

85th Percentile Speed
77.7 mph

Median Speed
44.9 mph

Average Speed
54.0 mph

10 MPH Pace Speed
30 mph to 40 mph
2288 vehicles in pace
Representing 38.6% of the total vehicles

Vehicles > 65 MPH
2288
38.6%

Station #: 230200000120
Site ID: 000000001801
Location: Route 37 NB, south of South St.
Direction: NORTH
Lane: 1

File: D0501031.prn
City: Braintree
County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	4	0	3	8	1	0	0	0	0	0	12	0	0	0	28
02:00	0	0	2	5	4	4	0	0	1	0	0	0	0	0	16
03:00	2	5	6	1	2	2	0	0	1	8	4	1	0	0	32
04:00	3	1	9	9	9	3	1	0	4	4	0	4	0	1	48
05:00	12	11	13	31	15	11	2	7	1	8	41	6	0	2	160
06:00	83	36	59	96	39	3	8	14	27	20	81	23	0	8	497
07:00	265	81	90	54	14	7	6	20	18	33	71	8	0	4	671
08:00	384	76	78	25	8	5	6	21	24	46	52	19	0	3	747
09:00	277	79	67	41	16	17	5	37	26	43	61	13	0	1	683
10:00	133	80	77	45	15	3	5	15	25	31	80	14	0	6	529
11:00	97	42	84	26	10	5	4	18	14	34	89	13	0	2	438
DAY TOTAL	1260	411	488	341	133	60	37	132	141	227	491	101	0	27	3849
PERCENTS	32.7%	10.7%	12.7%	8.9%	3.5%	1.6%	1.0%	3.4%	3.7%	5.9%	12.8%	2.6%	0.0%	0.7%	100.0%

Statistical Information...

15th Percentile Speed
34.7 mph

85th Percentile Speed
77.1 mph

Median Speed
46.6 mph

Average Speed
54.0 mph

10 MPH Pace Speed
30 mph to 40 mph
899 vehicles in pace
Representing 35.1% of the total vehicles

Vehicles > 65 MPH
960
37.5%

Mass Highway Department

SPEED SUMMARY
Mon 5/1/2023

STA. 18 SB

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: SOUTH
Lane: 1

File: D0501003.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
15:00	12	0	0	1	29	114	217	91	17	0	0	12	10	55	558
16:00	29	2	3	9	55	159	242	102	5	1	0	0	10	82	699
17:00	38	0	1	3	32	178	287	123	12	3	1	3	18	113	812
18:00	52	2	7	11	52	168	258	93	15	4	4	6	14	140	826
19:00	21	0	0	6	22	105	189	112	19	0	1	1	17	113	606
20:00	22	0	0	0	12	65	143	89	26	3	1	6	10	120	497
21:00	16	0	0	7	12	24	98	113	29	2	0	3	2	85	391
22:00	5	0	0	0	2	16	43	73	35	4	3	4	3	60	248
23:00	2	0	0	0	0	4	32	50	25	5	1	0	5	57	181
24:00	1	0	0	0	0	1	17	62	26	9	1	0	0	17	134
DAY TOTAL	198	4	11	37	216	834	1526	908	209	31	12	35	89	842	4952
PERCENTS	4.0%	0.1%	0.2%	0.7%	4.4%	16.8%	30.8%	18.3%	4.2%	0.6%	0.2%	0.7%	1.8%	17.0%	100.0%

Statistical Information...

15th Percentile Speed
31.9 mph

85th Percentile Speed
43.8 mph

Median Speed
37.8 mph

Average Speed
38.4 mph

10 MPH Pace Speed
35 mph to 45 mph
2434 vehicles in pace
Representing 62.2% of the total vehicles

Vehicles > 65 MPH
89
2.3%

Mass Highway Department

SPEED SUMMARY
Tue 5/2/2023

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: SOUTH
Lane: 1

File: D0501003.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	0	6	21	28	6	2	0	1	20	84
02:00	0	0	0	0	1	1	1	8	13	0	4	0	1	11	40
03:00	0	0	0	0	0	1	5	3	5	1	3	0	1	5	24
04:00	0	0	0	0	0	1	1	5	3	3	0	0	0	3	16
05:00	0	0	0	0	0	3	3	7	5	7	2	0	0	1	28
06:00	2	0	0	1	3	9	12	15	11	3	1	0	0	18	75
07:00	3	0	0	0	1	9	38	53	15	2	2	1	0	29	153
08:00	24	1	2	9	14	36	62	48	13	3	1	3	7	110	333
09:00	17	1	1	0	4	62	89	47	9	1	6	13	10	85	345
10:00	6	1	0	1	11	53	102	59	12	3	2	5	4	64	323
11:00	9	0	1	14	31	65	88	61	10	3	2	3	3	52	342
12:00	12	2	1	7	25	76	125	45	8	1	3	1	4	77	387
13:00	20	0	1	11	47	93	108	38	5	3	3	11	8	99	447
14:00	20	2	2	0	16	61	143	53	13	0	1	9	24	121	465
15:00	28	0	2	0	17	110	178	64	12	0	1	11	35	140	598
16:00	49	1	2	2	31	156	185	81	9	1	8	16	33	156	730
17:00	64	0	7	26	32	159	205	80	6	1	2	23	33	200	838
18:00	45	3	3	12	40	162	204	84	13	5	1	13	23	173	781
19:00	43	0	0	0	27	134	180	74	12	6	1	17	12	195	701
20:00	35	0	0	0	12	65	100	82	28	4	1	7	13	138	485
21:00	20	0	0	0	2	38	95	80	20	3	0	5	5	134	402
22:00	5	0	0	1	0	7	57	76	27	6	0	2	3	68	252
23:00	5	0	0	2	3	9	35	53	22	6	1	0	2	33	171
24:00	5	0	0	0	0	9	26	33	30	8	1	0	1	47	160
DAY TOTAL	412	11	22	86	317	1319	2048	1170	329	76	48	140	223	1979	8180
PERCENTS	5.0%	0.1%	0.3%	1.1%	3.9%	16.1%	25.0%	14.3%	4.0%	0.9%	0.6%	1.7%	2.7%	24.2%	100.0%

Statistical Information...

15th Percentile Speed
31.6 mph

85th Percentile Speed
44.8 mph

Median Speed
37.8 mph

Average Speed
39.2 mph

10 MPH Pace Speed
30 mph to 40 mph
3367 vehicles in pace
Representing 58.2% of the total vehicles

Vehicles > 65 MPH
223
3.9%

Mass Highway Department

SPEED SUMMARY
Wed 5/3/2023

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: SOUTH
Lane: 1

File: D0501003.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	3	8	24	24	4	3	0	4	9	79
02:00	2	0	0	0	0	0	9	9	5	3	2	0	0	8	38
03:00	0	0	0	0	1	0	2	6	4	4	3	2	0	1	23
04:00	0	0	0	0	0	0	5	5	3	4	0	4	0	1	22
05:00	0	0	0	0	1	4	1	6	8	0	1	2	0	6	29
06:00	1	0	0	0	0	2	15	17	12	0	0	1	2	8	58
07:00	10	0	0	0	5	18	35	30	22	2	5	4	6	40	177
08:00	12	0	0	4	20	39	57	68	22	1	1	9	12	74	319
09:00	25	0	0	0	13	47	77	58	17	1	3	4	9	82	336
10:00	18	1	1	1	18	31	90	70	19	2	0	5	0	70	326
11:00	12	0	0	0	23	72	89	46	13	3	1	3	12	76	350
12:00	17	1	0	3	17	72	112	40	14	4	0	8	13	105	406
13:00	24	0	0	0	27	85	107	79	6	2	3	15	17	140	505
14:00	41	0	0	1	11	82	117	92	22	0	0	9	8	137	520
15:00	25	0	2	9	22	97	192	82	23	1	2	6	12	111	584
16:00	45	3	2	0	54	126	194	96	16	6	8	5	20	145	720
17:00	56	2	9	6	43	187	224	93	17	0	4	17	25	143	826
18:00	45	0	0	0	49	191	257	109	17	1	0	11	16	187	883
19:00	42	3	0	5	30	99	164	107	24	1	2	8	17	145	647
20:00	27	0	0	0	13	87	147	87	14	0	0	7	16	117	515
21:00	14	0	0	5	4	47	115	103	15	0	2	1	2	93	401
22:00	14	0	0	0	1	26	61	86	30	3	2	3	1	66	293
23:00	5	0	0	0	1	9	35	44	27	4	2	1	0	45	173
24:00	4	0	0	0	0	6	29	60	41	3	0	0	1	38	182
DAY TOTAL	439	10	14	34	353	1330	2142	1417	415	49	44	125	193	1847	8412
PERCENTS	5.2%	0.1%	0.2%	0.4%	4.2%	15.8%	25.5%	16.8%	4.9%	0.6%	0.5%	1.5%	2.3%	22.0%	100.0%

Statistical Information...

15th Percentile Speed
31.9 mph

85th Percentile Speed
44.7 mph

Median Speed
38.1 mph

Average Speed
39.2 mph

10 MPH Pace Speed
35 mph to 45 mph
3559 vehicles in pace
Representing 58.1% of the total vehicles

Vehicles > 65 MPH
193
3.2%

Mass Highway Department

SPEED SUMMARY
Thu 5/4/2023

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: SOUTH
Lane: 1

File: D0501003.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	2	0	0	0	0	0	19	18	16	12	3	0	0	13	83
02:00	0	0	0	0	0	1	7	13	10	4	0	0	2	14	51
03:00	0	0	0	0	0	1	3	2	6	3	2	1	0	5	23
04:00	0	0	0	0	1	0	2	5	3	2	0	0	1	2	16
05:00	0	0	0	0	0	1	2	9	3	4	2	0	0	2	23
06:00	1	0	0	0	1	12	14	12	9	4	1	2	1	12	69
07:00	5	0	0	1	11	21	51	47	11	1	2	1	4	49	204
08:00	13	0	0	1	11	50	84	54	13	2	0	4	14	84	330
09:00	14	0	3	2	33	99	85	43	14	3	5	6	10	89	406
10:00	12	0	0	5	36	63	70	61	14	1	0	6	12	73	353
11:00	10	0	0	1	15	67	92	58	9	1	4	4	5	107	373
12:00	18	0	0	6	33	63	98	56	12	2	1	5	5	100	399
13:00	21	0	1	10	17	56	127	69	11	5	1	8	12	124	462
14:00	28	0	1	3	8	60	134	82	8	4	0	6	13	132	479
15:00	37	0	3	11	25	101	148	82	12	0	0	10	24	134	587
16:00	43	0	11	9	29	99	189	101	29	2	1	4	18	152	687
17:00	59	0	0	1	35	139	198	90	5	4	4	14	27	195	771
18:00	64	0	0	3	32	129	180	98	8	1	0	9	20	173	717
19:00	41	0	0	5	29	95	182	98	27	6	0	6	15	153	657
20:00	29	0	0	0	17	68	130	90	21	2	0	6	13	144	520
21:00	31	0	0	0	0	38	108	97	22	5	0	8	15	105	429
22:00	9	0	0	2	4	8	78	105	33	6	0	0	4	66	315
23:00	3	0	0	0	1	4	23	71	43	16	1	1	1	47	211
24:00	10	0	0	0	1	6	34	61	28	5	1	2	1	35	184
DAY TOTAL	450	0	19	60	339	1181	2058	1422	367	95	28	103	217	2010	8349
PERCENTS	5.4%	0.0%	0.2%	0.7%	4.1%	14.1%	24.6%	17.0%	4.4%	1.1%	0.3%	1.2%	2.6%	24.1%	100.0%

Statistical Information...

15th Percentile Speed
32.0 mph

85th Percentile Speed
44.8 mph

Median Speed
38.3 mph

Average Speed
39.4 mph

10 MPH Pace Speed
35 mph to 45 mph
3480 vehicles in pace
Representing 59.1% of the total vehicles

Vehicles > 65 MPH
217
3.7%

Station #: 230200000100
Site ID: 000000001802
Location: Route 37 SB, south of South St.
Direction: SOUTH
Lane: 1

File: D0501003.prn
City: Braintree
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	4	0	0	1	0	0	6	32	18	4	4	1	0	22	92
02:00	0	0	0	0	0	2	4	9	7	2	2	0	1	10	37
03:00	0	0	0	3	4	4	5	5	2	1	0	0	0	6	30
04:00	0	1	0	0	1	3	6	2	0	4	0	0	0	0	17
05:00	0	0	0	0	0	3	4	8	2	3	3	0	2	11	36
06:00	1	0	0	0	1	6	6	17	13	2	2	0	2	11	61
07:00	5	0	0	0	6	17	45	36	12	1	3	2	7	50	184
08:00	12	0	0	1	9	41	68	64	11	1	2	4	6	64	283
09:00	10	0	0	0	20	49	81	41	10	4	2	3	23	89	332
10:00	14	0	0	1	10	56	82	61	14	1	3	8	15	67	332
11:00	12	0	0	2	20	58	98	66	16	4	1	4	14	84	379
DAY TOTAL	58	1	0	8	71	239	405	341	105	27	22	22	70	414	1783
PERCENTS	3.3%	0.1%	0.0%	0.4%	4.0%	13.4%	22.7%	19.1%	5.9%	1.5%	1.2%	1.2%	3.9%	23.2%	100.0%

Statistical Information...

15th Percentile Speed
32.5 mph

85th Percentile Speed
47.4 mph

Median Speed
39.2 mph

Average Speed
40.7 mph

10 MPH Pace Speed
35 mph to 45 mph
746 vehicles in pace
Representing 56.9% of the total vehicles

Vehicles > 65 MPH
70
5.3%

Part 4: Signal Timing Data

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

ADAPTIVE TRAFFIC SIGNAL CONTROL SYSTEM PROJECT

7 LOCATIONS - GRANITE STREET (ROUTE 37)

IN THE TOWN OF

BRAINTREE

NORFOLK COUNTY

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	01	21
	PROJECT FILE NO.	608651	

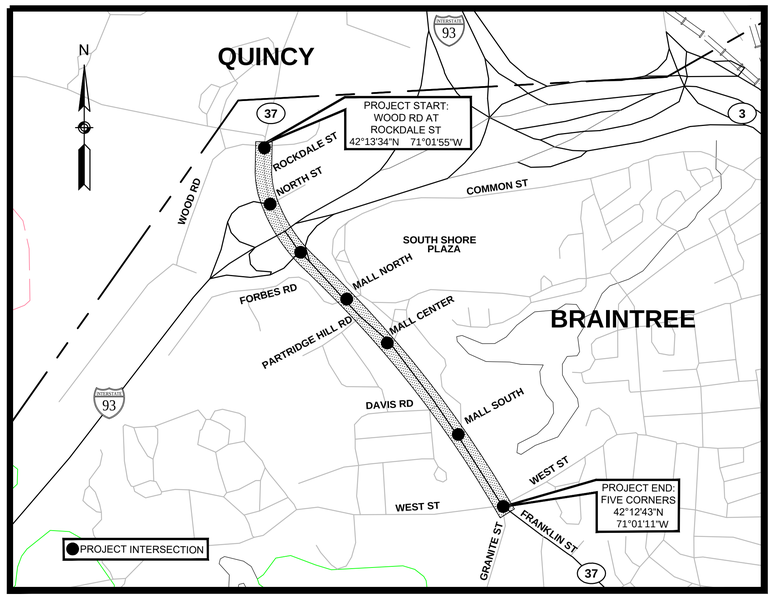
TITLE SHEET & INDEX

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK WILL GOVERN.

PS&E SUBMITTAL

INDEX

SHEET NO.	DESCRIPTION
01	TITLE SHEET & INDEX
02	LEGEND, ABBREVIATIONS & GENERAL NOTES
03-16	TRAFFIC SIGNAL PLANS
17	SYSTEM ARCHITECTURE PLAN
18	CONSTRUCTION DETAILS
19-21	TEMPORARY TRAFFIC CONTROL PLANS



0 1000 2000 3000 4000

SCALE: 1" = 1000'

PROJECT LENGTH: 6,200 FEET

JULY 2018

DATE	DESCRIPTION	REV #

PLAN PREPARED BY:
vhb
101 WALNUT STREET
WATERTOWN, MA 02471

DATE

massDOT
Massachusetts Department of Transportation
Highway Division

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

APPROVED

HIGHWAY ADMINISTRATOR DATE

_HDI(COV).DWG Plotted on 13-Aug-2018 2:33 PM

LEGEND

GENERAL SYMBOLS

EXISTING

JB	JERSEY BARRIER
CB	CATCH BASIN
	BUOY
	FLAG POLE
	GAS PUMP
DI	DROP INLET
MB	MAIL BOX
GR	GRANITE POST
PLN	PLANTER
PST	POST
TBH	TELEPHONE BOOTH
VLT	VAULT
VLV	VALVE
WELL	WELL
EHH	ELECTRIC MANHOLE (HANDHOLE)
FCGA	GATE POST
FL	FLOW LINE
	GAS GATE
BH	BORING HOLE
	MONITORING WELL
	TEST PIT
HC	CONCRETE HEADWALL
HH	HANDHOLE
HS	STONE HEADWALL
HYD	HYDRANT
LPL	LIGHT POLE
CO. BO.	COUNTY BOUND
GPS	GPS POINT
CMH	CABLE MANHOLE
DMH	DRAINAGE MANHOLE
EMH	ELECTRIC MANHOLE
GMH	GAS MANHOLE
MMH	MISC MANHOLE
OMH	OTHER MANHOLE
SMH	SEWER MANHOLE
TMH	TELEPHONE MANHOLE
WMH	WATER MANHOLE
MHB	MHD BOUND
MON	MONUMENT
SB	STONE BOUND
TOWN OR CITY BD.	TOWN OR CITY BOUND
	TRAVERSE OR TRIANGULATION STATION
TPL OR GUY	TROLLEY POLE OR GUY POLE
TRNP	TRANS. POLE
UFB	UP W ITH FIREBOX
LPDL	POLE WITH DOUBLE LIGHT
ULT	UP W ITH 1 LIGHT
UPL	UTILITY POLE
	BUSH
	TREE
STUMP	STUMP
	SWAMP / MARSH
WG	WATER GATE
FA	FIRE ALARM BOX
PM	PARKING METER
	ELECTRICAL GROUND
	GATE VALVE
	RIP RAP
OHW	OVERHEAD CABLE
	DIRECT BURIAL CABLE
	CURBING
185	CONTOURS
SD	DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
	ELECTRIC DUCT
G	GAS MAIN
SS	SEWER MAIN
T	TELEPHONE DUCT
W	WATER MAIN
	BALANCE STONE WALL
	CULVERT
	GUARD RAIL
	GUTTER LINE AT DRIVEWAYS
CLF	CHAIN LINK FENCE
	STOCKADE FENCE
	GUTTER INLET
MAG	MAG NAIL

GENERAL SYMBOLS (CONT.)

EXISTING

	HAY BALES/SILT FENCE
	RETAINING WALL
	TREE LINE OR LIMIT OF CLEARING AND GRUBBING
	SAWCUT LINE
	TOP OR BOTTOM OF SLOPE
	LIMIT OF EDGE OF PAVEMENT OR COLD PLAN & OVERLAY
	BANK OF RIVER OR STREAM
WF-#	BORDER OF WETLAND
	100 FT WETLAND OR 200 FT RIVERFRONT BUFFER
DATE OF LAYOUT	STATE HIGHWAY LAYOUT
DATE OF LAYOUT	TOWN OR CITY LAYOUT
DATE OF LAYOUT	COUNTY LAYOUT
R.R. S/L	RAILROAD SIDELINE
	TOWN OR CITY BOUNDARY LINE
P.L. OR APPROX. P.L.	PROPERTY LINE OR APPROXIMATE PROPERTY LINE
	EASEMENT

PAVEMENT MARKINGS AND SIGNING SYMBOLS

EXISTING

ONLY	PAVEMENT ARROW - WHITE
	LEGEND "ONLY" - WHITE
	WHITE STOP LINE - 12"
	WHITE CROSSWALK (WIDTH NOTED)
	SOLID WHITE LANE LINE
	BROKEN WHITE LANE LINE (10' LINE, 30' SPACE TYP.)
	SOLID WHITE EDGE LINE
	SOLID YELLOW CHANNELIZATION LINE
	DOUBLE YELLOW CENTER LINE
	SOLID WHITE CHANNELIZATION LINE
	SOLID YELLOW EDGE LINE
	LONG DOTTED WHITE LINE
	DOTTED WHITE LANE LINE
	DIRECTION OF TRAFFIC FLOW
	SHARED LANE

TRAFFIC SIGNAL SYMBOLS

EXISTING	PROPOSED	
⌀1	⌀1	CONTROLLER PHASE ACTUATED
		WIRE LOOP DETECTOR (6'X 6' TYPICAL UNLESS OTHERWISE SPECIFIED)
		PEDESTRIAN PUSH BUTTON, SIGN AND SADDLE
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD (TYPE AS NOTED OR AS SPECIFIED)
		PEDESTRIAN SIGNAL POST AND BASE
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		STEEL MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		SIGN AND POST
		SIGN AND POST (TWO POSTS)
		CONTROL CABINET, GROUND MOUNTED
		HANDHOLE 12" X 24" (AND AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		JUNCTION BOX 24" X 24" X 10"
		VEHICLE DETECTION SENSOR
		VIRTUAL VEHICLE DETECTION ZONE

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	02	21
PROJECT FILE NO. 608651			

LEGEND, ABBREVIATIONS & GENERAL NOTES

GENERAL NOTES

1. BASE PLAN INFORMATION BASED ON MASSDOT LAYOUT PLANS WITH EDITS BASED ON VHB FIELD NOTES AND AERIAL IMAGERY.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK.
3. UTILITY RELOCATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
4. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
5. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
6. EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
7. EXISTING SIGNS AND PAVEMENT MARKINGS WITHIN THE PROJECT LIMIT SHALL BE RETAINED UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

ABBREVIATIONS

ABAN	ABANDON
ADJ	ADJUST
APPROX	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BD.	BOUND
BLDG	BUILDING
BO	BY OTHERS
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE / CAST IN PLACE
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
CL (OR ℄)	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEC	ELECTRIC
EMB	EMBANKMENT
EMH	ELECTRIC MANHOLE
EOP	EDGE OF PAVEMENT
EXIST (OR EX)	EXISTING
EB	EASTBOUND
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HH	HANDHOLE
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HWY	HIGHWAY
HYD	HYDRANT
JCT	JUNCTION
LB	LEACHING BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAIL BOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
MTD	MOUNTED
NIC	NOT IN CONTRACT
NO.	NUMBER
OC	ON CENTER
PROJ	PROJECT
PROP	PROPOSED
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R&D	REMOVE AND DISPOSE
R&R	REMOVE & RESET
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT-OF-WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SBT	STEEL BACKED TIMBER
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
TEL	TELEPHONE
TEMP	TEMPORARY
TMH	TELEPHONE MANHOLE
TTCP	TEMP TRAFFIC CONTROL PLAN
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
WB	WESTBOUND
WCR	WHEELCHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN

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BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	03	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 1

NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

N

R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
R&R BLUETOOTH READER POWER INTERFACE UNIT
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION
SEE NOTE 6

PROP 15' EXTENSION BRACKET
(SEE NOTE 4)

PROP VEHICLE DETECTION SENSOR (TYP)

PROP VEHICLE DETECTION ZONE (TYP)

ABAN EXIST WIRE LOOP DETECTOR (TYP)

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT I-93 SB RAMPS

PROP 15' EXTENSION BRACKET
(SEE NOTE 4)

GRANITE ST (ROUTE 37)
1978 SHLO NO. 6324
WOOD ROAD
CHICKATAWBUT ROAD
ROCKDALE STREET
1957 SHLO NO. 4556
2009 SHLO NO. 7985
BUSHMAN
ONLY
SERVICE CONNECTION POLE #107
N/F The Flatley 06 LLC Granite St 2057-0-12G
N/F The Flatley 06 LLC 1 Rockdale St 2057-0-7
N/F Bushman Francis C/o Flatley Co 44 Granite St 2057-0-6K

20 0 20 40
SCALE IN FEET

CONSTRUCTION NOTES

1. SEE SHEET 04 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. EXTENSION BRACKETS FOR DETECTION SENSOR SHALL BE POSITIONED TO PROVIDE OPTIMAL VEHICLE DETECTION PER MANUFACTURER RECOMMENDATIONS WHILE AVOIDING PHYSICAL CONTACT WITH EXISTING OVERHEAD WIRES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
6. EXISTING BONDING WIRES HAVE BEEN CUT IN THE BASE OF THE CABINET. CONTRACTOR SHALL RE-ESTABLISH UNTERMINATED BONDING WIRES.

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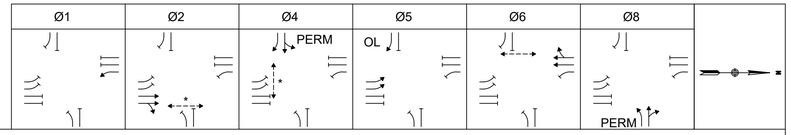


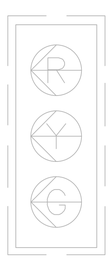
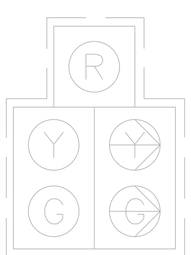
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FLASH
GRANITE STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
GRANITE STREET	SB	A,B	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	D,E	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
GRANITE STREET	NB	F,G	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
WOOD ROAD	EB	H	R	R	R	R	R	R	G	Y	R	R–G	R–Y	R	R	R	R	R	R	R	FR
WOOD ROAD	EB	J	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
ROCKDALE STREET	WB	K,L	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	N-S	P1-P2	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	E-W	P3-P4	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	N-S	P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																					
MINIMUM GREEN (INITIAL)			5			10			5			5			10			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2			2			2			
MAXIMUM 1			15			40			30			20			40			30			
MAXIMUM 2			15			40			30			20			40			30			
YELLOW CLEARANCE				3.5			4			4.5			3.5			4			4.5		
RED CLEARANCE					3.5			1			1.5			4			1			1.5	
PEDESTRIAN INTERVAL						7/12			8/24						7/16						
DETECTOR MEMORY			NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			
RECALL			OFF			MIN			OFF			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES					
TIMING PLAN	WEEKS	CYCLE	OFFSET	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
1/1/1 M-F 0500-1200	1-53	110	3	22	70	18	34	58	18
2/1/1 M-F 1200-2100	1-47	120	118	14	55	51	16	53	51
3/1/1 SAT&SUN 1000-2100	1-47	100	20	13	66	21	24	55	21
4/1/1 ALL 1200-2100	48-53	120	118	14	55	51	16	53	51
21/1/1 ALL 0500-2100	1-53	60	59	15	30	15	15	30	15
MODE					COORD Ø			COORD Ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. OL = OVERLAP
4. PERM = PERMISSIVE
5. ø4 & ø8 DUAL ENTRY
6. MAXIMUM 1 = NORMAL OPERATION
7. MAXIMUM 2 = NOT USED
8. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
9. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
10. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
11. PLAN FORCE OFF SHALL BE IN EFFECT.
12. YIELD MODE SHALL BE IN EFFECT.
13. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
14. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
15. WHEN A PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.
16. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON–ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING SIGNAL HEAD DATA

A,B,F,G,J,K,L	C,D,E	H	P1-P6
			
ALL 12" LENS			

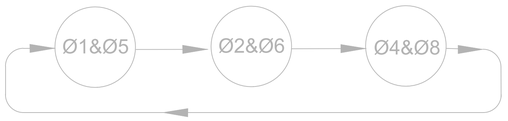
PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø1&Ø6
D2	2		Ø2&Ø5
D3	3		Ø4
D4	4		Ø8

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3 OR D4 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D3 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

EXISTING PREFERENTIAL PHASE SEQUENCE



LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT WOOD ROAD/ROCKDALE STREET

PAY ITEM	QUANTITY	DESCRIPTION
816.01	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	VEHICLE DETECTION SYSTEM (5 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	3	15' EXTENSION BRACKET
	1	MALFUNCTION MANAGEMENT UNIT
	2	INTERFACE/EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	04	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 1

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	ADAPTIVE CONTROL
1	ROUTE 37 SB LEFT LANE	S1	0	Ø1	-
2	ROUTE 37 SB THRU LANE	S1	0	Ø6	-
3	ROUTE 37 SB THRU/RIGHT LANE	S1	0	Ø6	-
4	ROUTE 37 NB LEFT LANE (LEFT)	S2	0	Ø5	-
5	ROUTE 37 NB LEFT LANE (RIGHT)	S2	0	Ø5	-
6	ROUTE 37 NB THRU LANE	S2	0	Ø2	-
7	ROUTE 37 NB THRU/RIGHT LANE	S2	0	Ø2	-
8	WOOD ROAD EB LEFT/THRU LANE	S3	0	Ø4	-
9	WOOD ROAD EB RIGHT LANE	S3	0	Ø4	-
10	ROCKDALE STREET WB LEFT LANE	S4	0	Ø8	-
11	ROCKDALE STREET WB THRU/RIGHT LANE	S4	0	Ø8	-
17	ROUTE 37 SB LEFT LANE	S1	0	-	Ø1
18	ROUTE 37 SB THRU LANE	S1	0	-	Ø6
19	ROUTE 37 SB THRU/RIGHT LANE	S1	0	-	Ø6
20	ROUTE 37 NB LEFT LANE (LEFT)	S2	0	-	Ø5
21	ROUTE 37 NB LEFT LANE (RIGHT)	S2	0	-	Ø5
22	ROUTE 37 NB THRU LANE	S2	0	-	Ø2
23	ROUTE 37 NB THRU/RIGHT LANE	S2	0	-	Ø2
24	WOOD ROAD EB LEFT/THRU LANE	S3	0	-	Ø4
25	WOOD ROAD EB RIGHT LANE	S3	0	-	Ø4
26	ROCKDALE STREET WB LEFT LANE	S4	0	-	Ø8
27	ROCKDALE STREET WB THRU/RIGHT LANE	S4	0	-	Ø8
28	ROUTE 37 SB DEPARTURE (LEFT)	S5	0	-	COUNTING
29	ROUTE 37 SB DEPARTURE (RIGHT)	S5	0	-	COUNTING
30	ROUTE 37 SB DEPARTURE (LEFT)	S5	0	-	SYSTEM
31	ROUTE 37 SB DEPARTURE (RIGHT)	S5	0	-	SYSTEM
32	ROUTE 37 SB THRU LANE	S1	0	-	SYSTEM
33	ROUTE 37 SB THRU/RIGHT LANE	S1	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:34 PM

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	05	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 2

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:34 PM

VIDEO DETECTION ZONES 11a & 11b
LOCATED 375'± FROM STOP LINE

I-93 SB OFF RAMP

I-93 SB ON RAMP

GRANITE STREET (ROUTE 37)

GRANITE STREET (ROUTE 37)

NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

PROP 15' EXTENSION BRACKET
(SEE NOTE 4)

PROP RADAR UNIT

PROP VEHICLE DETECTION ZONE (TYP)

R&S EXIST OPTICALLY PROGRAMMED SIGNAL HEAD
PROP LED SIGNAL HEAD

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT I-93 NB RAMPS

ABAN EXIST WIRE LOOP DETECTOR (TYP)

PROP VEHICLE DETECTION SENSOR (TYP)

PROP 15' EXTENSION BRACKET
(SEE NOTE 4)

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT WOOD ROAD

R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION

NORTH STREET

1957 SHLO NO. 4556

Bn (ma) Grs 11-58 Inc
C/o Barnes & Noble #1989
150 Granite St
2056-0-6B

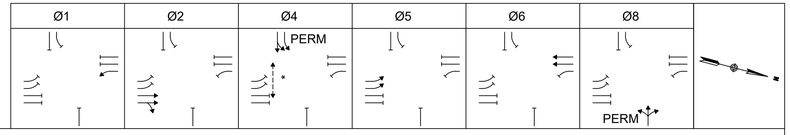
Palmer Blake K/Dorothy Trs
Palmer Family Realty Trust
120 Granite St
2057-0-9

20 0 20 40
SCALE IN FEET

CONSTRUCTION NOTES

1. SEE SHEET 08 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. EXTENSION BRACKETS FOR DETECTION SENSOR SHALL BE POSITIONED TO PROVIDE OPTIMAL VEHICLE DETECTION PER MANUFACTURER RECOMMENDATIONS WHILE AVOIDING PHYSICAL CONTACT WITH EXISTING OVERHEAD WIRES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:34 PM



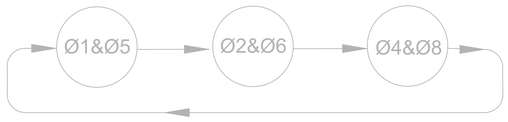
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FLASH
GRANITE STREET	SB	A	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
GRANITE STREET	SB	B,C	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	D,E	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
GRANITE STREET	NB	F	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
GRANITE STREET	NB	G	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
I-95 SB RAMPS	EB	H	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
NORTH STREET	WB	K,L	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	E-W	P1-P2	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																					
MINIMUM GREEN (INITIAL)			5			10			5			5			10			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2			2			2			
MAXIMUM 1			20			40			30			30			40			30			
MAXIMUM 2			20			40			30			30			40			30			
YELLOW CLEARANCE				3.5			4			4.5			3.5			4			4.5		
RED CLEARANCE					2.5			1			3			2.5			1			3	
PEDESTRIAN INTERVAL									8/20												
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			MIN			OFF			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES					
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø1	ø2	ø4	ø5	ø6	ø8
1/1/1 M-F 0500-1200	1-53	110	102	12	71	27	26	57	27
2/1/1 M-F 1200-2100	1-47	120	6	15	80	25	30	65	25
3/1/1 SAT&SUN 1000-2100	1-47	100	5	12	60	28	30	42	28
4/1/1 ALL 1200-2100	48-53	120	6	15	80	25	30	65	25
21/1/1 ALL 0500-2100	1-53	60	3	15	30	15	15	30	15
MODE					COORD ø			COORD ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. PERM = PERMISSIVE
4. MAXIMUM 1 = NORMAL OPERATION
5. MAXIMUM 2 = NOT USED
5. ø4 & ø8 DUAL ENTRY
6. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
7. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
8. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
9. PLAN FORCE OFF SHALL BE IN EFFECT.
10. YIELD MODE SHALL BE IN EFFECT.
11. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
12. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
15. WHEN A PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.
16. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON-ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING PREFERENTIAL PHASE SEQUENCE



PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø1&Ø6
D2	2		Ø2&Ø5

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1 OR D2 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D2 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION, QUEUE PRE-EMPTION, AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

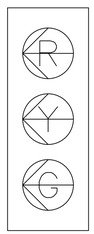
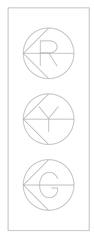
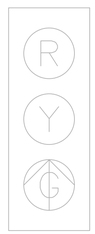
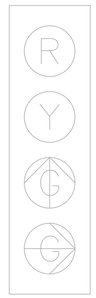
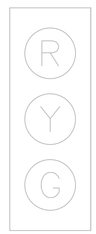
QUEUE DETECTION OPERATION
1. A PRE-EMPT CALL SHALL BE PLACED INTO THE CONTROLLER AFTER A DELAY TIME ON DETECTOR ZONES 11a & 11b HAS TIMED OUT (INITIALLY SET AT 40 SECONDS).
2. THIS QUEUE PRE-EMPT SHALL CAUSE THE CONTROLLER TO FORCE OFF PHASES CURRENTLY IN OPERATION AND SERVICE PHASE 4.
3. PRE-EMPT DURATION SHALL INITIALLY BE SET FOR 30 SECONDS.
4. UPON TERMINATION OF PRE-EMPTION, THE CONTROLLER SHALL RETURN TO NORMAL OPERATION BY SERVICING PHASES 2 & 6.
5. THE CONTROLLER SHALL BE INITIALLY PROGRAMMED TO PROVIDE A MINIMUM RESERVICE TOME FOR QUEUE PRE-EMPT OF 4 MINUTES.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE QUEUE DETECTION PRE-EMPT.
7. THE QUEUE PRE-EMPTION SHALL OVERRIDE COORDINATION.
8. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	ADAPTIVE CONTROL
1	ROUTE 37 SB LEFT LANE	S1	0	Ø1	-
2	ROUTE 37 SB THRU LANE (LEFT)	S1	0	Ø6	-
3	ROUTE 37 SB THRU LANE (RIGHT)	S1	0	Ø6	-
4	ROUTE 37 NB LEFT LANE (LEFT)	S2	0	Ø5	-
5	ROUTE 37 NB LEFT LANE (RIGHT)	S2	0	Ø5	-
6	ROUTE 37 NB THRU LANE	S2	0	Ø2	-
7	ROUTE 37 NB THRU/RIGHT LANE	S2	0	Ø2	-
8	I-93 RAMP EB LEFT LANE	S3	0	Ø4	-
9	I-93 RAMP EB LEFT-THRU LANE	S3	0	Ø4	-
10	NORTH STREET WB	S4	0	Ø8	-
11a, 11b	I-93 RAMP EB (QUEUE DETECTION)	R1	0	Ø4	-
17	ROUTE 37 SB LEFT LANE	S1	0	-	Ø1
18	ROUTE 37 SB THRU LANE	S1	0	-	Ø6
19	ROUTE 37 SB THRU LANE (RIGHT)	S1	0	-	Ø6
20	ROUTE 37 NB LEFT LANE (LEFT)	S2	0	-	Ø5
21	ROUTE 37 NB LEFT LANE (RIGHT)	S2	0	-	Ø5
22	ROUTE 37 NB THRU LANE	S2	0	-	Ø2
23	ROUTE 37 NB THRU/RIGHT LANE	S2	0	-	Ø2
24	I-93 RAMP EB LEFT LANE	S3	0	-	Ø4
25	I-93 RAMP EB LEFT-THRU LANE	S3	0	-	Ø4
26	NORTH STREET WB	S4	0	-	Ø8
27	ROUTE 37 SB DEPARTURE (LEFT)	S5	0	-	SYSTEM
28	ROUTE 37 SB DEPARTURE (RIGHT)	S5	0	-	SYSTEM
29	ROUTE 37 NB DEPARTURE (LEFT)	S6	0	-	SYSTEM
30	ROUTE 37 NB DEPARTURE (RIGHT)	S6	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

PROPOSED/EXISTING SIGNAL HEAD DATA

E	A,D,~~F~~	B,C,F	G	H,J,K,L,M	P1-P2
					
	R&S HEAD E				
ALL 12" LENS					

NOTE:
1. PROP SIGNAL HEAD SHALL BE EQUIPPED WITH L.E.D. MODULES.

LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT I-93 SOUTHBOUND RAMPS/NORTH STREET

PAY ITEM	QUANTITY	DESCRIPTION
816.02	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	12" 3-SECTION SIGNAL HEAD, L.E.D.
	1	VEHICLE DETECTION SYSTEM (1 RADAR UNIT AND 6 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	2	15' EXTENSION BRACKET
	1	MALFUNCTION MANAGEMENT UNIT
	2	INTERFACE/ EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	07	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 3

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:35 PM

N/F
Karma Nominee Trust Karma Trustee LLC Tr
50 Forbes Rd
204.3-0-1

1957 SHLO NO. 4556

N

I-93 NB OFF RAMP

I-93 NB ON RAMP

GRANITE STREET (ROUTE 37)

ONLY

10'

7a

7b

VIDEO DETECTION ZONES 7a & 7b
LOCATED 350'± FROM STOP LINE

NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT FORBES ROAD

PROP RADAR UNIT

R&S EXIST 8' TS POST & BASE
PROP 20' TS POST & BASE
ON EXIST FOUNDATION
R&R PED SIGNAL HEADS &
PUSH BUTTONS TO PROP POST

R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION

R1

P1 P2 P3 P4 P5 P6

A B C D D1 D2 E F

S1 S2 S3 S4 S5

1 2 3 4 5 6 17 18 19 20 21 22 23 24 25 26

PROP VEHICLE DETECTION SENSOR (TYP)

PROP VEHICLE DETECTION ZONE (TYP)

ABAN EXIST WIRE LOOP DETECTOR (TYP)

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT I-93 SB RAMPS

20 0 20 40
SCALE IN FEET

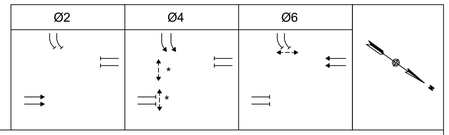
CONSTRUCTION NOTES

1. SEE SHEET 08 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	08	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 3



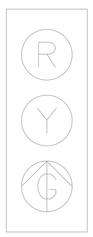
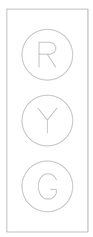
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	FLASH
GRANITE STREET	SB	A,B	R	R	R	R	R	R	G*	Y	R	FY
GRANITE STREET	NB	C,D	G	Y	R	R	R	R	R	R	R	FY
I-95 NB RAMPS	EB	E,F	R	R	R	G	Y	R	R	R	R	FR
PEDESTRIAN	E-W	P1-P2,P3-P4	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	N-S	P5-P6	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	OUT
TIMING IN SECONDS												
MINIMUM GREEN (INITIAL)			10			5			10			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			
MAXIMUM 1			40			30			40			
MAXIMUM 2			40			30			40			
YELLOW CLEARANCE				4			3			4		
RED CLEARANCE					1			4			1	
PEDESTRIAN INTERVAL						7/7			7/7			
DETECTOR MEMORY			NON–LOCK			NON–LOCK			NON–LOCK			
RECALL			MIN			OFF			MIN			

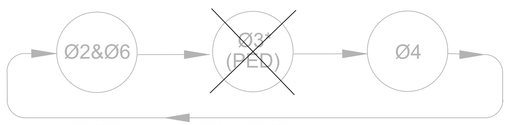
COORDINATION DATA				COORDINATION PHASE SPLIT TIMES		
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø2	ø4	ø6
1/1/1 M-F 0500-1200	1-53	110	38	67	43	67
2/1/1 M-F 1200-2100	1-47	120	43	90	30	90
3/1/1 SAT&SUN 1000-2100	1-47	100	70	79	21	79
4/1/1 ALL 1200-2100	48-53	120	43	90	30	90
21/1/1 ALL 0500-2100	1-53	60	22	40	20	40
MODE				COORD ø		COORD ø

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. MAXIMUM 1 = NORMAL OPERATION
4. MAXIMUM 2 = NOT USED
5. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
6. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
7. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
8. PLAN FORCE OFF SHALL BE IN EFFECT.
9. YIELD MODE SHALL BE IN EFFECT.
10. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
11. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
12. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON–ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING SIGNAL HEAD DATA

A,B	C,D,E,F	P1-P6
		
ALL 12" LENS		

PROPOSED/EXISTING PREFERENTIAL PHASE SEQUENCE



* UPON PEDESTRIAN PUSH BUTTON ACTUATION

PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1	⇄	Ø6
D2	2	⇉	Ø2

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1 OR D2 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D2 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION, QUEUE PRE-EMPTION, AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

QUEUE DETECTION OPERATION
1. A PRE-EMPT CALL SHALL BE PLACED INTO THE CONTROLLER AFTER A DELAY TIME ON DETECTOR ZONES 7a & 7b HAS TIMED OUT (INITIALLY SET AT 40 SECONDS).
2. THIS QUEUE PRE-EMPT SHALL CAUSE THE CONTROLLER TO FORCE OFF PHASES CURRENTLY IN OPERATION AND SERVICE PHASE 4.
3. PRE-EMPT DURATION SHALL INITIALLY BE SET FOR 30 SECONDS.
4. UPON TERMINATION OF PRE-EMPTION, THE CONTROLLER SHALL RETURN TO NORMAL OPERATION BY SERVICING PHASES 2 & 6.
5. THE CONTROLLER SHALL BE INITIALLY PROGRAMMED TO PROVIDE A MINIMUM RESERVICE TOME FOR QUEUE PRE-EMPT OF 4 MINUTES.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE QUEUE DETECTION PRE-EMPT.
7. THE QUEUE PRE-EMPTION SHALL OVERRIDE COORDINATION.
8. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	ADAPTIVE CONTROL
1	ROUTE 37 SB THRU LANE (LEFT)	S1	0	Ø6	-
2	ROUTE 37 SB THRU LANE (RIGHT)	S1	0	Ø6	-
3	ROUTE 37 NB THRU LANE (LEFT)	S2	0	Ø2	-
4	ROUTE 37 NB THRU LANE (RIGHT)	S2	0	Ø2	-
5	I-93 RAMP EB LEFT LANE (LEFT)	S3	0	Ø4	-
6	I-93 RAMP EB LEFT LANE (RIGHT)	S3	0	Ø4	-
7a & 7b	I-93 RAMP EB (QUEUE DETECTION)	R1	0	Ø4	-
17	ROUTE 37 SB THRU LANE (LEFT)	S1	0	-	Ø6
18	ROUTE 37 SB THRU LANE (RIGHT)	S1	0	-	Ø6
19	ROUTE 37 NB THRU LANE (LEFT)	S2	0	-	Ø2
20	ROUTE 37 NB THRU LANE (RIGHT)	S2	0	-	Ø2
21	I-93 RAMP EB LEFT LANE (LEFT)	S3	0	-	Ø4
22	I-93 RAMP EB LEFT LANE (RIGHT)	S3	0	-	Ø4
23	ROUTE 37 SB DEPARTURE (LEFT)	S4	0	-	SYSTEM
24	ROUTE 37 SB DEPARTURE (RIGHT)	S4	0	-	SYSTEM
25	ROUTE 37 NB DEPARTURE (LEFT)	S5	0	-	SYSTEM
26	ROUTE 37 NB DEPARTURE (RIGHT)	S5	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT I-93 NORTHBOUND RAMPS

PAY ITEM	QUANTITY	DESCRIPTION
816.03	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	20' TS POST STANDARD & BASE
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	VEHICLE DETECTION SYSTEM (1 RADAR UNIT AND 5 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	1	MALFUNCTION MANAGEMENT UNIT
	2	INTERFACE/ EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:35 PM

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	09	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 4

Plotted on 13-Aug-2018 2:35 PM
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NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

N/F
Global Montello Group Corp
Forbes Rd
2043-0-1F

N/F
Ten Forbes Associates
C/o Simon Co Debra Doulette
10 Forbes Rd
2043-0-1B

N/F
Karma Nominee Trust Karma Trustee LLC Tr
50 Forbes Rd
2043-0-1

N/F
Global Montello Group Corp
265 Granite Street
2043-0-2E

N/F
Braintree Property Associates
C/O Simon Property Group Taxes
250 Granite Street
2089-0-22

FORBES ROAD

GRANITE STREET (ROUTE 37)

MALL NORTHERN DRIVEWAY

R3-8(L-T/R)

R3-7L

1957 SHLO NO. 4556

1987 SHLO NO. 6741

R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT I-95 NB RAMPS

PROP 360° CAMERA

R&S EXIST OPTICALLY PROGRAMMED SIGNAL HEAD
PROP LED SIGNAL HEAD

ABAN EXIST WIRE LOOP DETECTOR (TYP)

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT MALL CENTER DRIVEWAY

R&S EXIST OPTICALLY PROGRAMMED SIGNAL HEAD
PROP LED SIGNAL HEAD

PROP 360° CAMERA

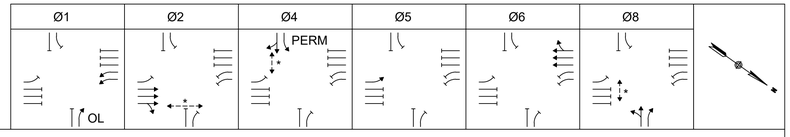
PROP VEHICLE DETECTION ZONE (TYP)

ONLY

20 0 20 40
SCALE IN FEET

CONSTRUCTION NOTES

1. SEE SHEET 10 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. EXTENSION BRACKETS FOR DETECTION SENSOR SHALL BE POSITIONED TO PROVIDE OPTIMAL VEHICLE DETECTION PER MANUFACTURER RECOMMENDATIONS WHILE AVOIDING PHYSICAL CONTACT WITH EXISTING OVERHEAD WIRES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.



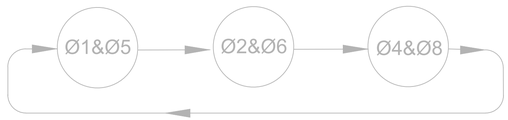
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FLASH
GRANITE STREET	SB	A,B	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
GRANITE STREET	SB	C	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	SB	D,E	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	F,G	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
GRANITE STREET	NB	H	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
GRANITE STREET	NB	J	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
FORBES ROAD	EB	K,L,M	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
MALL NORTHERN DWY	WB	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
MALL NORTHERN DWY	WB	P	R	G	R	Y	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	E-W	P1-P2	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	E-W	P3-P4	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	OUT
PEDESTRIAN	N-S	P5-P6	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																					
MINIMUM GREEN (INITIAL)			5			10			5			5			10			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2			2			2			
MAXIMUM 1			20			40			30			20			40			30			
MAXIMUM 2			20			40			30			20			40			30			
YELLOW CLEARANCE				3.5			4			4			3.5			4			4		
RED CLEARANCE					4			1			2			4			1			2	
PEDESTRIAN INTERVAL						7/27			7/10									7/11			
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			MIN			OFF			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES					
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø1	ø2	ø4	ø5	ø6	ø8
1/1/1 M-F 0500-1200	1-53	110	22	14	44	52	20	38	52
2/1/1 M-F 1200-2100	1-47	120	32	30	40	50	18	52	50
3/1/1 SAT&SUN 1000-2100	1-47	100	37	31	33	36	18	46	36
4/1/1 ALL 1200-2100	48-53	120	32	30	40	50	18	52	50
21/1/1 ALL 0500-2100	1-53	60	16	15	30	15	15	30	15
MODE					COORD ø			COORD ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. OL = OVERLAP
4. PERM = PERMISSIVE
5. MAXIMUM 1 = NORMAL OPERATION
6. MAXIMUM 2 = NOT USED
7. ø4 & ø8 DUAL ENTRY
8. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
9. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
10. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
11. PLAN FORCE OFF SHALL BE IN EFFECT.
12. YIELD MODE SHALL BE IN EFFECT.
13. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
15. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
16. WHEN A PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.
17. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON-ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING PREFERENTIAL PHASE SEQUENCE



PROPOSED/EXISTING SIGNAL HEAD DATA

A,B	~~A,B~~	C,K,L,M,N	D,E,J	F,G	H	P	P1-P6
	R&S HEAD A&B						W/COUNTDOWN TIMER
	ALL 12" LENS						

NOTE:
1. PROP SIGNAL HEADS SHALL BE EQUIPPED WITH L.E.D. MODULES.

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	ADAPTIVE CONTROL
1	ROUTE 37 SB LEFT LANE (LEFT)	C1	0	Ø1	-
2	ROUTE 37 SB LEFT LANE (RIGHT)	C1	0	Ø1	-
3	ROUTE 37 SB THRU LANE (LEFT)	C1	0	Ø6	-
4	ROUTE 37 SB THRU LANE (RIGHT)	C1	0	Ø6	-
5	ROUTE 37 SB THRU/RIGHT LANE	C1	0	Ø6	-
6	ROUTE 37 NB LEFT LANE	C2	0	Ø5	-
7	ROUTE 37 NB THRU LANE (LEFT)	C2	0	Ø2	-
8	ROUTE 37 NB THRU LANE (RIGHT)	C2	0	Ø2	-
9	ROUTE 37 NB THRU/RIGHT LANE	C2	0	Ø2	-
10	FORBES ROAD EB LEFT LANE	C1	0	Ø4	-
11	FORBES ROAD EB THRU/RIGHT LANE	C1	0	Ø4	-
12	MALL WB LEFT/THRU LANE	C2	0	Ø8	-
13	MALL WB RIGHT LANE	C2	0	Ø8	-
14	FORBES ROAD EB LEFT LANE	C1	0	Ø4	-
15	FORBES ROAD EB THRU/RIGHT LANE	C1	0	Ø4	-
17	ROUTE 37 SB LEFT LANE (LEFT)	C1	0	-	Ø1
18	ROUTE 37 SB LEFT LANE (RIGHT)	C1	0	-	Ø1
19	ROUTE 37 SB THRU LANE (LEFT)	C1	0	-	Ø6
20	ROUTE 37 SB THRU LANE (RIGHT)	C1	0	-	Ø6
21	ROUTE 37 SB THRU/RIGHT LANE	C1	0	-	Ø6
22	ROUTE 37 NB LEFT LANE	C2	0	-	Ø5
23	ROUTE 37 NB THRU LANE (LEFT)	C2	0	-	Ø2
24	ROUTE 37 NB THRU LANE (RIGHT)	C2	0	-	Ø2
25	ROUTE 37 NB THRU/RIGHT LANE	C2	0	-	Ø2
26	FORBES ROAD EB LEFT LANE	C1	0	-	Ø4
27	FORBES ROAD EB THRU/RIGHT LANE	C1	0	-	Ø4
28	MALL WB LEFT/THRU LANE	C2	0	-	Ø8
29	MALL WB RIGHT LANE	C2	0	-	Ø8
30	ROUTE 37 SB DEPARTURE (LEFT)	C1	0	-	SYSTEM
31	ROUTE 37 SB DEPARTURE (CENTER)	C1	0	-	SYSTEM
32	ROUTE 37 SB DEPARTURE (RIGHT)	C1	0	-	SYSTEM
33	ROUTE 37 NB DEPARTURE (LEFT)	C2	0	-	SYSTEM
34	ROUTE 37 NB DEPARTURE (CENTER)	C2	0	-	SYSTEM
35	ROUTE 37 NB DEPARTURE (RIGHT)	C2	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	10	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 4

PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø1&Ø6
D2	2		Ø2&Ø5
D3	3		Ø4
D4	4		Ø8

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3 OR D4 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D4 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT FORBES ROAD/MALL NORTHERN DRIVEWAY

PAY ITEM	QUANTITY	DESCRIPTION
816.04	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	2	12" 3-SECTION SIGNAL HEAD, L.E.D.
	1	VEHICLE DETECTION SYSTEM (2 360° CAMERAS, INTERFACE BOARD & CABLES)
	1	MALFUNCTION MANAGEMENT UNIT
	3	INTERFACE/ EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:35 PM

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	11	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 5

NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

N

N/F
Maria A. Dos Santos
343 Granite Street
2043-0-2A

N/F
Robert R. Repetta
Repetta Family Trust
333 Granite Street
2043-0-2B

N/F
Richard F. Repetta, Adam C. Barrett
321 Granite Street
2043-0-2D

N/F
Silvana C. Dicesare
317 Granite Street
2043-0-2E

N/F
Fiore Dinanno, Licia Dinanno
309 Granite Street
2043-0-2F

Jose A/Mar

GRANITE STREET (ROUTE 37)

RESIDENTIAL DRIVEWAY

1987 SHLO NO. 6741

BIT. DR.

PROP VEHICLE DETECTION SENSOR (TYP)

R&S EXIST 10' TS POST & BASE
PROP 20' TS POST & BASE
ON EXIST FOUNDATION
R&R SIGNAL HEAD "K" TO PROP POST

ABAN EXIST WIRE LOOP DETECTOR (TYP)

P1 P2 P3 P4

S1 S2 S3 S4 S5 S6

A B C D D1 D2 D3 E G H J K L

1 2 3 4 5 6 7 8 9 10 11 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ONLY

PROP VEHICLE DETECTION ZONE (TYP)

1987 SHLO NO. 6741

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT MALL SOUTHERN DRIVEWAY

N/F
Braintree Property Associates
C/O Simon Property Group Taxes
250 Granite Street
2089-0-22

MALL CENTER DRIVEWAY

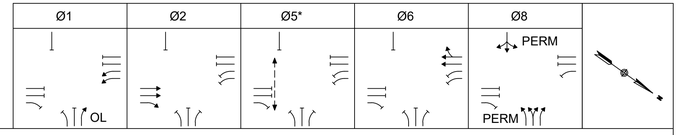
R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
R&R BLUETOOTH READER POWER INTERFACE UNIT
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION

R&D EXIST COMMUNICATION CABLE
PROP 12 PAIR TWISTED 19 AWG
SHIELDED COMMUNICATION CABLE
IMSA SPEC 40-2
IN EXISTING CONDUIT
TO TS CONTROLLER AT FORBES ROAD

20 0 20 40
SCALE IN FEET

CONSTRUCTION NOTES
1. SEE SHEET 12 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.

_TR(TSIG).DWG Plotted on 14-Aug-2018 7:41 AM



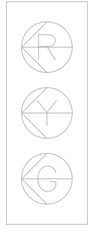
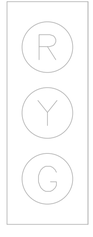
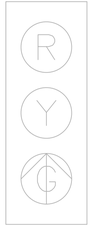
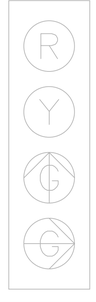
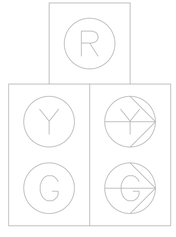
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	FLASH
GRANITE STREET	SB	A,B	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
GRANITE STREET	SB	C,D	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	E	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	F	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
RESIDENTIAL DRIVEWAY	EB	G,H	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
MALL CENTER DWY	WB	J,K	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
MALL CENTER DWY	WB	L	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	E-W	P1-P2,P3-P4	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																		
MINIMUM GREEN (INITIAL)			5			10						10			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2						2			2			
MAXIMUM 1			30			40						40			30			
MAXIMUM 2			30			40						40			30			
YELLOW CLEARANCE				3.5			4			4			4			3.5		
RED CLEARANCE					3.5			1						1			2.5	
PEDESTRIAN INTERVAL									7/22									
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			MIN			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES				
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø1	ø2	ø5	ø6	ø8
1/1/1 M-F 0500-1200	1-53	110	50	19 (33)	76 (62)	– (33)	76 (62)	15 (15)
2/1/1 M-F 1200-2100	1-47	120	46	30 (33)	55 (52)	– (33)	85 (52)	35 (35)
3/1/1 SAT&SUN 1000-2100	1-47	100	2	33 (33)	38 (38)	– (33)	71 (38)	29 (29)
4/1/1 ALL 1200-2100	48-53	120	46	30 (33)	55 (52)	– (33)	85 (52)	35 (35)
21/1/1 ALL 0500-2100	1-53	60	23	15 (33)	30 (16)	– (33)	45 (16)	15 (11)
MODE					COORD ø		COORD ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. OL = OVERLAP
4. PERM = PERMISSIVE
5. MAXIMUM 1 = NORMAL OPERATION
6. MAXIMUM 2 = NOT USED
7. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
8. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
9. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
10. PLAN FORCE OFF SHALL BE IN EFFECT.
11. YIELD MODE SHALL BE IN EFFECT.
12. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
13. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
14. (XX) SPLIT TIME WITH PEDESTRIAN PHASE ACTUATED.
15. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON-ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING SIGNAL HEAD DATA

A,B	C,D,G,H,J,K	E	F	L	P1-P4
					

ALL 12" LENS

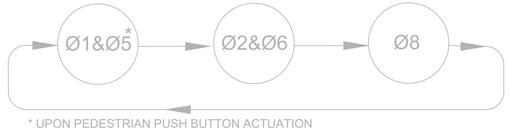
PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø1&Ø6
D2	2		Ø2
D3	3		Ø8

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2 OR D3 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D3 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

EXISTING PREFERENTIAL PHASE SEQUENCE



* UPON PEDESTRIAN PUSH BUTTON ACTUATION

LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT MALL CENTER DRIVEWAY/RESIDENTIAL DRIVEWAY

PAY ITEM	QUANTITY	DESCRIPTION
816.05	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	20' TS POST STANDARD & BASE
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	VEHICLE DETECTION SYSTEM (6 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	1	MALFUNCTION MANAGEMENT UNIT
	2	INTERFACE/ EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	12	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 5

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	UTILIZATION PHASE
1	ROUTE 37 SB LEFT LANE (LEFT)	S1	0	Ø1	-
2	ROUTE 37 SB LEFT LANE (RIGHT)	S1	0	Ø1	-
3	ROUTE 37 SB THRU LANE	S1	0	Ø6	-
4	ROUTE 37 SB THRU/RIGHT LANE	S1	0	Ø6	-
5	ROUTE 37 NB THRU LANE (LEFT)	S2	0	Ø2	-
6	ROUTE 37 NB THRU LANE (RIGHT)	S2	0	Ø2	-
7	ROUTE 37 NB RIGHT LANE	S2	0	Ø2	-
8	RESIDENTIAL DWY EB	S3	5 SEC DELAY	Ø8	-
9	MALL CENTER DWY LEFT LANE	S4	0	Ø8	-
10	MALL CENTER DWY LEFT/RIGHT LANE	S4	0	Ø8	-
11	MALL CENTER DWY RIGHT LANE	S4	5 SEC DELAY	Ø8	-
17	ROUTE 37 SB LEFT LANE (LEFT)	S1	0	-	Ø1
18	ROUTE 37 SB LEFT LANE (RIGHT)	S1	0	-	Ø1
19	ROUTE 37 SB THRU LANE	S1	0	-	Ø6
20	ROUTE 37 SB THRU/RIGHT LANE	S1	0	-	Ø6
21	ROUTE 37 NB THRU LANE (LEFT)	S2	0	-	Ø2
22	ROUTE 37 NB THRU LANE (RIGHT)	S2	0	-	Ø2
23	ROUTE 37 NB RIGHT LANE	S2	0	-	Ø2
24	RESIDENTIAL DWY EB	S3	0	-	Ø8
25	MALL CENTER DWY LEFT LANE	S4	0	-	Ø8
26	MALL CENTER DWY LEFT/RIGHT LANE	S4	0	-	Ø8
27	MALL CENTER DWY RIGHT LANE	S4	0	-	Ø8
28	ROUTE 37 SB DEPARTURE (LEFT)	S5	0	-	SYSTEM
29	ROUTE 37 SB DEPARTURE (RIGHT)	S5	0	-	SYSTEM
30	ROUTE 37 NB DEPARTURE (LEFT)	S6	0	-	SYSTEM
31	ROUTE 37 NB DEPARTURE (RIGHT)	S6	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

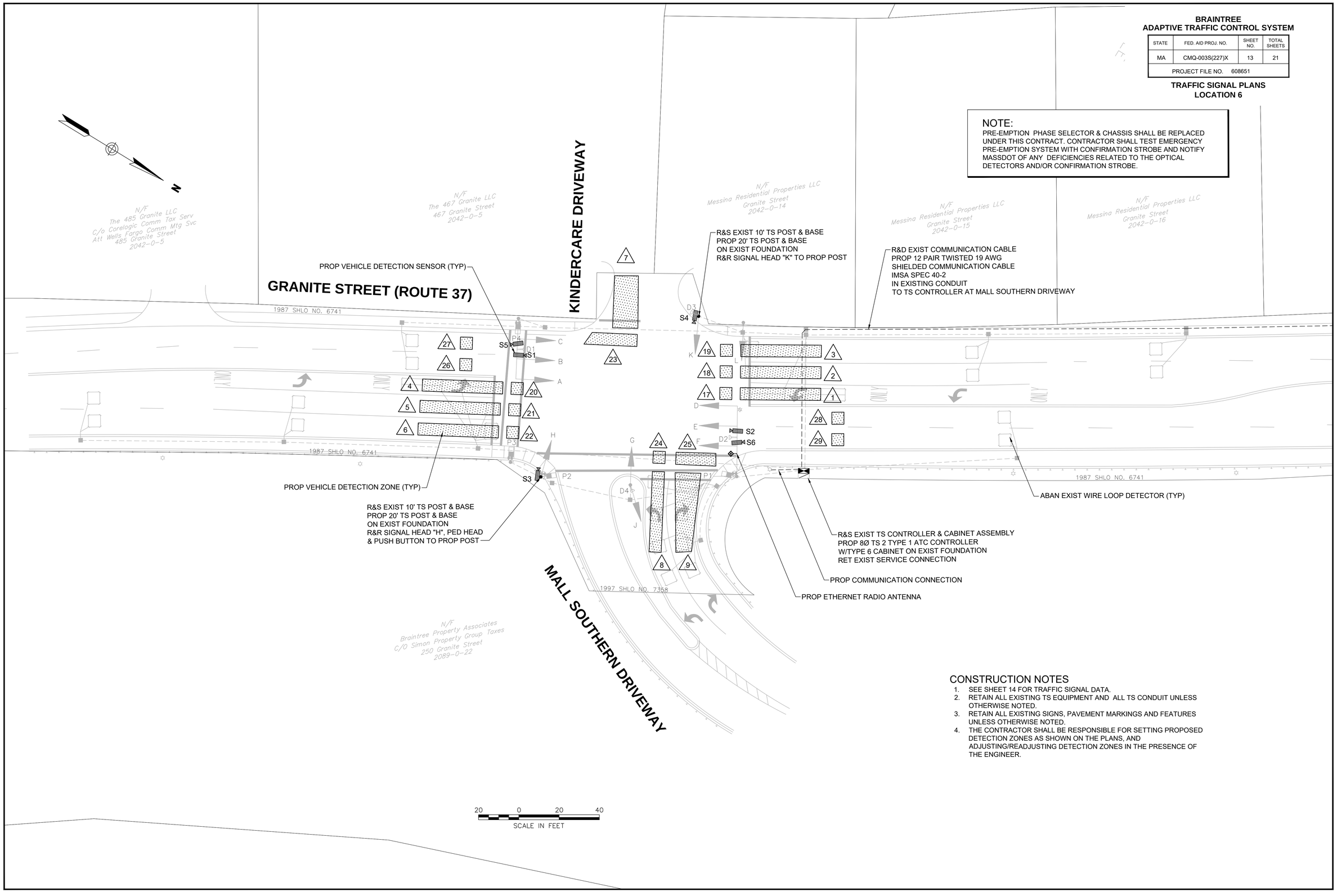
_TR(TSIG).DWG Plotted on 13-Aug-2018 2:35 PM

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	13	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 6

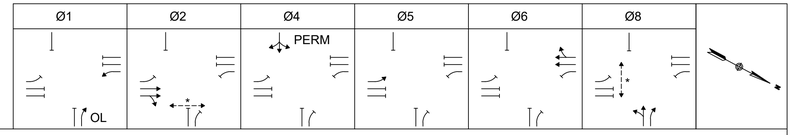
NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.



CONSTRUCTION NOTES

1. SEE SHEET 14 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.

_TR(TSIG).DWG Plotted on 13-Aug-2018 3:11 PM



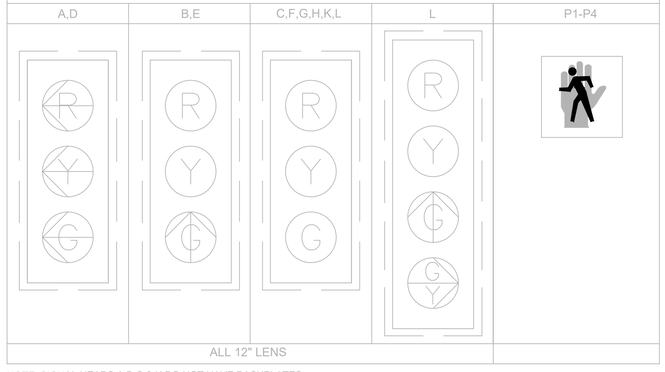
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FLASH
GRANITE STREET	SB	A	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
GRANITE STREET	SB	B	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	SB	C	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FY
GRANITE STREET	NB	D	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
GRANITE STREET	NB	E	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
GRANITE STREET	NB	F	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
KINDERCARE DRIVEWAY	EB	G,H	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
MALL SOUTHERN DWY	WB	J,K	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
MALL SOUTHERN DWY	WB	L	R G	R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	N-S	P1-P2	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	E-W	P3-P4	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	OUT
TIMING IN SECONDS																					
MINIMUM GREEN (INITIAL)			5			10			5			5			10			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2			2			2			
MAXIMUM 1			20			40			30			15			40			30			
MAXIMUM 2			20			40			30			15			40			30			
YELLOW CLEARANCE				3.5			4			4.5			3.5			4			4.5		
RED CLEARANCE					3			1.5			2			3			1.5			2	
PEDESTRIAN INTERVAL						7/20												7/11			
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			MIN			OFF			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES					
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø1	ø2	ø4	ø5	ø6	ø8
1/1/1 M-F 0500-1200	1-53	110	0	20	70	20	20	70	20
2/1/1 M-F 1200-2100	1-47	120	0	13	65	42	13	65	42
3/1/1 SAT&SUN 1000-2100	1-47	100	0	13	59	28	13	59	28
4/1/1 ALL 1200-2100	48-53	120	0	13	65	42	13	65	42
21/1/1 ALL 0500-2100	1-53	60	0	15	30	15	15	30	15
MODE					COORD ø			COORD ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. OL = OVERLAP
4. PERM = PERMISSIVE
5. MAXIMUM 1 = NORMAL OPERATION
6. MAXIMUM 2 = NOT USED
7. ø4 & ø8 DUAL ENTRY
8. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
9. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
10. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
11. PLAN FORCE OFF SHALL BE IN EFFECT.
12. YIELD MODE SHALL BE IN EFFECT.
13. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
14. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
15. WHEN A PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.
16. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON-ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

EXISTING SIGNAL HEAD DATA



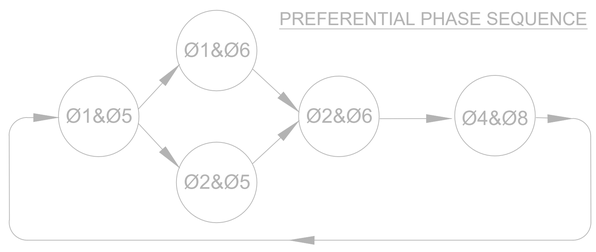
NOTE: SIGNAL HEADS A,B,C & K DO NOT HAVE BACKPLATES.

PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø1&Ø6
D2	2		Ø2
D3	3		Ø4
D4	4		Ø8

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3 OR D4 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D4 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5



LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT MALL SOUTHERN DRIVEWAY/KINDERCARE DRIVEWAY

PAY ITEM	QUANTITY	DESCRIPTION
816.06	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	2	20' TS POST STANDARD & BASE
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	VEHICLE DETECTION SYSTEM (6 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	1	MALFUNCTION MANAGEMENT UNIT
	2	INTERFACE/ EXTENSION VIDEO BIU
	1	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS
	1	WIRELESS COMMUNICATIONS SYSTEM (W/1 ANTENNA, 1 ETHERNET RADIO UNIT INTERFACE TO DSL CONNECTION & CABLES)
	1	HIGH SPEED COMMUNICATIONS CONVERTER & ROUTER

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	14	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 6

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	UTILIZATION PHASE
1	ROUTE 37 SB LEFT LANE	S1	0	Ø1	-
2	ROUTE 37 SB THRU LANE	S1	0	Ø6	-
3	ROUTE 37 SB THRU/RIGHT LANE	S1	0	Ø6	-
4	ROUTE 37 NB LEFT LANE	S2	0	Ø5	-
5	ROUTE 37 NB THRU LANE	S2	0	Ø2	-
6	ROUTE 37 NB THRU/RIGHT LANE	S2	0	Ø2	-
7	KINDERCARE DWY EB	S3	0	Ø4	-
8	MALL SOUTHERN DWY LEFT/THRU LANE	S4	0	Ø8	-
9	MALL CENTER DWY RIGHT LANE	S4	5 SEC DELAY	Ø8	-
17	ROUTE 37 SB LEFT LANE	S1	0	-	Ø1
18	ROUTE 37 SB THRU LANE	S1	0	-	Ø6
19	ROUTE 37 SB THRU/RIGHT LANE	S1	0	-	Ø6
20	ROUTE 37 NB LEFT LANE	S2	0	-	Ø5
21	ROUTE 37 NB THRU LANE	S2	0	-	Ø2
22	ROUTE 37 NB THRU/RIGHT LANE	S2	0	-	Ø2
23	KINDERCARE DWY EB	S3	0	-	Ø4
24	MALL SOUTHERN DWY LEFT/THRU LANE	S4	0	-	Ø8
25	MALL CENTER DWY RIGHT LANE	S4	0	-	Ø8
26	ROUTE 37 SB DEPARTURE (LEFT)	S5	0	-	SYSTEM
27	ROUTE 37 SB DEPARTURE (RIGHT)	S5	0	-	SYSTEM
28	ROUTE 37 NB DEPARTURE (LEFT)	S6	0	-	SYSTEM
29	ROUTE 37 NB DEPARTURE (RIGHT)	S6	0	-	SYSTEM

NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:36 PM

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	15	21
PROJECT FILE NO. 608651			

TRAFFIC SIGNAL PLANS
LOCATION 7

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:36 PM

NOTE:
PRE-EMPTION PHASE SELECTOR & CHASSIS SHALL BE REPLACED UNDER THIS CONTRACT. CONTRACTOR SHALL TEST EMERGENCY PRE-EMPTION SYSTEM WITH CONFIRMATION STROBE AND NOTIFY MASSDOT OF ANY DEFICIENCIES RELATED TO THE OPTICAL DETECTORS AND/OR CONFIRMATION STROBE.

PROP VEHICLE DETECTION SENSOR (TYP)
PROP 15' EXTENSION BRACKET (SEE NOTE 4)
PROP VEHICLE DETECTION ZONE (TYP)
PROP ETHERNET RADIO ANTENNA
R&S EXIST 8' TS POST & BASE
PROP 20' TS POST & BASE
ON EXIST FOUNDATION
R&R PED SIGNAL HEADS
& PED PUSH BUTTON
TO PROP TS POST
R&S EXIST TS CONTROLLER & CABINET ASSEMBLY
R&R BLUETOOTH READER POWER INTERFACE UNIT
PROP 8Ø TS 2 TYPE 1 ATC CONTROLLER
W/TYPE 6 CABINET ON EXIST FOUNDATION
RET EXIST SERVICE CONNECTION
SEE NOTE 6
ABAN EXIST MAGNETOMETER (TYP)
ABAN EXIST WIRE LOOP DETECTOR (TYP)

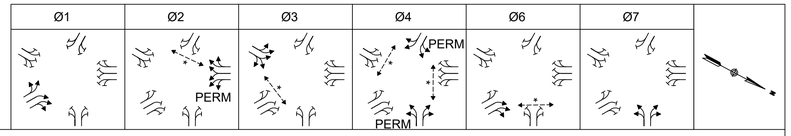
GRANITE STREET
GRANITE STREET (ROUTE 37)
WEST STREET
FRANKLIN STREET (ROUTE 37)
WEST STREET
ONLY ONLY
1987 SHLO NO. 6741
8"x23"
R10-11b
R10-10L
Trees/Shrubs

N/F Siracusa Marc A, Siracusa Marisa Tbye, 107 Richard Rd, 1087-0-92
N/F Santosuosso Alfred, 370 West St, 2048-0-11
N/F Messina Residential Properties LLC, 371 West St, 2042-0-2
N/F Ravech Sonia E/Ellen J Tr, C/o Dunkin Donuts Inc #303452, 551 Granite Street, 2048-0-12
N/F Messina Commercial Properties, 539 Granite Street, 2042-0-1
N/F Wildwood Estates Of Braintree Inc, 392 400 Franklin St, 1022-0-14
N/F Messina Commercial Properties LLC, C/o Td Bank, 405 Franklin St, 2047-0-11B
N/F Messina Commercial Properties LLC, C/o Ryan, 550 Granite St, 2040-0-3B
N/F Messina Commercial Properties LLC, C/o Ryan, 540 Granite St, 2040-0-3A
N/F Pp Granite Realty LLC, 536 Granite Street, 2040-0-4C

20 0 20 40
SCALE IN FEET

CONSTRUCTION NOTES

1. SEE SHEET 16 FOR TRAFFIC SIGNAL DATA.
2. RETAIN ALL EXISTING TS EQUIPMENT AND ALL TS CONDUIT UNLESS OTHERWISE NOTED.
3. RETAIN ALL EXISTING SIGNS, PAVEMENT MARKINGS AND FEATURES UNLESS OTHERWISE NOTED.
4. EXTENSION BRACKETS FOR DETECTION SENSOR SHALL BE POSITIONED TO PROVIDE OPTIMAL VEHICLE DETECTION PER MANUFACTURER RECOMMENDATIONS WHILE AVOIDING PHYSICAL CONTACT WITH EXISTING OVERHEAD WIRES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
6. EXISTING TRESS/SHRUBS SHALL BE RETAINED. CONTRACTOR SHALL TRIM TREES/SHRUBS ONLY AS DIRECTED BY THE ENGINEER.



SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FLASH
GRANITE STREET (RT 37)	SB	A,B,C,D	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
FRANKLIN STREET (RT 37)	NB	E	G-G	Y-Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
FRANKLIN STREET (RT 37)	NB	F,G,H	G	Y	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
WEST STREET	EB	J,K,L,M	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
WEST STREET	WB	N,P	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	G-G	Y	R	FR
WEST STREET	WB	Q	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	G	Y	R	FR
GRANITE STREET	NEB	R,S	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN	N-S	P1-P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	E-W	P7-P8	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	E-W	P3-P4	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN	N-S	P5-P6,P9-P10	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																					
MINIMUM GREEN (INITIAL)			5			5			5			5			5			5			CONFLICT FLASH OPERATION ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2			2			2			
MAXIMUM 1			15			35			30			20			35			15			
MAXIMUM 2			15			35			30			20			35			15			
DYNAMIC MAX			30			70			40			30			70			20			
MAX STEP			5			5			5			5			5			5			
YELLOW CLEARANCE				4			4			4			4.5			4			3		
RED CLEARANCE					2			2			2			2			2			3.5	
PEDESTRIAN INTERVAL						7/18			7/14			8/19			9/9						
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			MIN			OFF			OFF			MIN			OFF			

COORDINATION DATA				COORDINATION PHASE SPLIT TIMES					
TIMING PLAN	WEEKS	CYCLE	OFFSET	ø1	ø2	ø3	ø4	ø6	ø7
1/1/1 M-F 0500-1200	1-53	110	86	17	32	24	21	49	16
2/1/1 M-F 1200-2100	1-47	120	10	16	50	20	21	66	13
3/1/1 SAT&SUN 1000-2100	1-47	100	2	12	33	21	21	45	13
4/1/1 ALL 1200-2100	48-53	120	10	16	50	20	21	66	13
21/1/1 ALL 0500-2100	1-53	60	10	11	13	12	13	24	11
MODE					COORD ø			COORD ø	

NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D..
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. PERM = PERMISSIVE
4. MAXIMUM 1 = NORMAL OPERATION
5. MAXIMUM 2 = NOT USED
6. DYNAMIC MAX = ALL DAYS, 0500-2100.
7. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
8. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
9. OFFSET: BEGINNING OF ø2 & ø6 YELLOW
10. PLAN FORCE OFF SHALL BE IN EFFECT.
11. YIELD MODE SHALL BE IN EFFECT.
12. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
13. FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT.
14. WHEN A PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.
15. COORDINATION SHALL BE PROGRAMMED SUCH THAT THE COORDINATED PHASE(S) IS NOT OPERATING UNDER ACTIVE CALL TO NON-ACTUATED (CNA). PEDESTRIAN DEMAND WILL BE CONDITIONALLY SERVICED BASED UPON PEDESTRIAN PUSH BUTTON ACTUATION ONLY.

NOTE:
CONTRACTOR SHALL PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) ON WEST STREET BEFORE THE PREFERENTIAL PHASE SEQUENCE IS CHANGED PER THE TYPICAL "PCMS SIGNS - FIVE CORNERS" DETAIL SHOWN ON SHEET 19.

EXISTING SIGNAL HEAD DATA

A,B,C,D,F,G,H J,K,L,M,Q,R,S	E	N,P	P1-P10
R Y G	R Y Y G G	R Y G G	W/COUNTDOWN TIMER
ALL 12" LENS			

NOTE: SIGNAL HEAD M HAS A BACKPLATE.

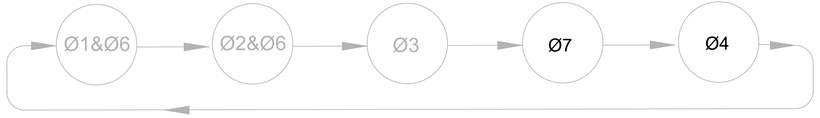
PROPOSED PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø2
D2	2		Ø1&Ø6
D3	3		Ø4
D4	4		Ø7
D5	5		Ø3

EMERGENCY VEHICLE PRE-EMPTION OPERATION
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3, D4 OR D5 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D5 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4, D5) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4, #5) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE COORDINATION AND ADAPTIVE PROGRAMMING.

PROPOSED ADAPTIVE TRAFFIC CONTROL SETTINGS			
INTERSECTION SETTINGS (ALL ENTRIES IN SECONDS)			
MIN CYCLE	MAX CYCLE	MAX CYCLE RATE OF CHANGE	MAX SPLIT RATE OF CHANGE
60	140	10	5

PROPOSED/ EXISTING PREFERENTIAL PHASE SEQUENCE



LIST OF MAJOR ITEMS REQUIRED

GRANITE STREET (ROUTE 37) AT FRANKLIN STREET & WEST STREET (FIVE CORNERS)

PAY ITEM	QUANTITY	DESCRIPTION
816.07	1	8Ø TS 2 TYPE 1 ATC CONTROLLER, W/INTERNAL ADAPTIVE CONTROL BY CYCLE/SPLIT/OFFSET W/TYPE 6 CABINET ON EXIST FOUNDATION
	1	20' TS POST STANDARD & BASE
	1	ADAPTIVE INTERSECTION LICENSE
	1	ETHERNET OVER COPPER ACCESS DEVICE, 8-PAIRS
	1	VEHICLE DETECTION SYSTEM (7 SENSORS OR 2 360° CAMERAS, INTERFACE BOARD & CABLES)
	1	MALFUNCTION MANAGEMENT UNIT
	3	INTERFACE/ EXTENSION VIDEO BIU
	2	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	2	EMERGENCY PRE-EMPTION SYSTEM CHASSIS
	1	WIRELESS COMMUNICATIONS SYSTEM (W/1 ANTENNA, 1 ETHERNET RADIO UNIT INTERFACE TO DSL CONNECTION & CABLES)

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

BRAINTREE
ADAPTIVE TRAFFIC CONTROL SYSTEM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	CMQ-003S(227)X	16	21
PROJECT FILE NO. 608651			

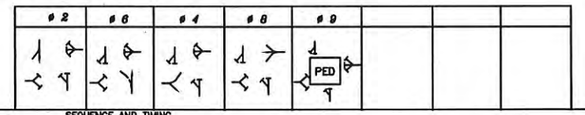
TRAFFIC SIGNAL PLANS
LOCATION 7

PROPOSED DETECTION DATA

DETECTION ZONE	APPROACH/LANE	CAMERA	DELAY /EXT	CALL PHASE	UTILIZATION PHASE
1	ROUTE 37 SB LEFT-THRU LANE	S1	0	Ø2	-
2	ROUTE 37 SB THRU-RIGHT LANE	S1	0	Ø2	-
3	ROUTE 37 SB RIGHT LANE	S1	0	Ø2	-
4	ROUTE 37 NB LEFT LANE	S2	0	Ø1	-
5	ROUTE 37 NB THRU LANE	S2	0	Ø6	-
6	ROUTE 37 NB THRU-RIGHT LANE	S2	0	Ø6	-
7	WEST STREET EB LEFT-THRU LANE	S3	0	Ø4	-
8	WEST STREET EB THRU-RIGHT LANE	S3	0	Ø4	-
9	WEST STREET WB LEFT-THRU LANE	S4	0	Ø7	-
10	WEST STREET WB THRU-RIGHT LANE	S4	0	Ø4	-
11	GRANITE STREET NEB LEFT-THRU LANE	S5	0	Ø3	-
12	GRANITE STREET NEB THRU-RIGHT-LANE	S5	0	Ø3	-
17	ROUTE 37 SB LEFT-THRU LANE	S1	0	-	Ø2
18	ROUTE 37 SB THRU-RIGHT LANE	S1	0	-	Ø2
19	ROUTE 37 SB RIGHT LANE	S1	0	-	Ø2
20	ROUTE 37 NB LEFT LANE	S2	0	-	Ø1
21	ROUTE 37 NB THRU LANE	S2	0	-	Ø6
22	ROUTE 37 NB THRU-RIGHT LANE	S2	0	-	Ø6
23	WEST STREET EB LEFT-THRU LANE	S3	0	-	Ø4
24	WEST STREET EB THRU-RIGHT LANE	S3	0	-	Ø4
25	WEST STREET WB LEFT-THRU LANE	S4	0	-	Ø7
26	WEST STREET WB THRU-RIGHT LANE	S4	0	-	Ø4
27	GRANITE STREET NEB LEFT-THRU LANE	S5	0	-	Ø3
28	GRANITE STREET NEB THRU-RIGHT-LANE	S5	0	-	Ø3
29	ROUTE 37 NB DEPARTURE (LEFT)	S6	0	-	COUNTING
30	ROUTE 37 NB DEPARTURE (RIGHT)	S6	0	-	COUNTING
31	GRANITE STREET NEB LEFT-THRU LANE	S7	0	-	SYSTEM
32	GRANITE STREET NEB THRU-RIGHT-LANE	S7	0	-	SYSTEM

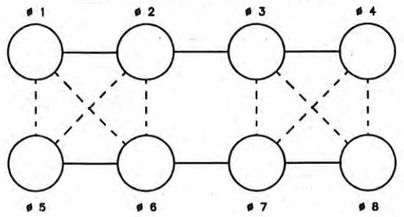
NOTES:
1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/READJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.
3. DETECTION ZONES SHALL RECORD VOLUME AND OCCUPANCY.

_TR(TSIG).DWG Plotted on 13-Aug-2018 2:36 PM



SEQUENCE AND TIMING																		
APPROACH	DIRECTION	HOUSING	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	FLASHING OPERATION
MINIMUM INTERVAL			10			10			10			10						
PASSAGE			3			3			3			3						
MAXIMUM 1			40			40			20			20						HOURS TO EMERGENCY
MAXIMUM 2																		
YELLOW CLEARANCE				4			4			4			4					
RED CLEARANCE					2			2			2			2				
PEDESTRIAN															7	10	1	
RTE. 37	NB	A,B	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
RTE. 37	SB	C,D	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FY
SAFFORD ST.	EB	E,F	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
SUMMER ST.	WB	G,H	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
PEDESTRIAN	ALL		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF
MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			LOCK			
RECALL			SOFT			SOFT			OFF			OFF			OFF			

NEMA DUAL RING PHASING NOTES:



BRAINTREE
RTE.37/SUMMER ST.

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	0475	01	2	

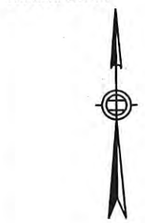
TRAFFIC SIGNAL PLAN

DETECTOR NOTES:

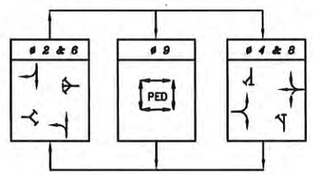
1. SEE DETECTOR DETAIL SHEET FROM DESIGN DOCUMENT FOR OTHER INFORMATION.
2. DELAY AND EXTENSION TIMES ARE IN SECONDS.
3. DELAY TIME SHALL BE EFFECTIVE ONLY DURING THE RED PORTION OF THE PHASE THAT IS CALLED BY THE DETECTOR.

DETECTOR DATA					
DET. ID.	DETECTION AREA SIZE	CALL DELAY	CALL PHASE	EXTEND	OPERATION
1	VIDEO CAMERA	0	ø6	–	PRESENCE
2	VIDEO CAMERA	0	ø2	–	PRESENCE
3	VIDEO CAMERA	0	ø8	–	PRESENCE
4	VIDEO CAMERA	0	ø4	–	PRESENCE

APPROX. NORTH

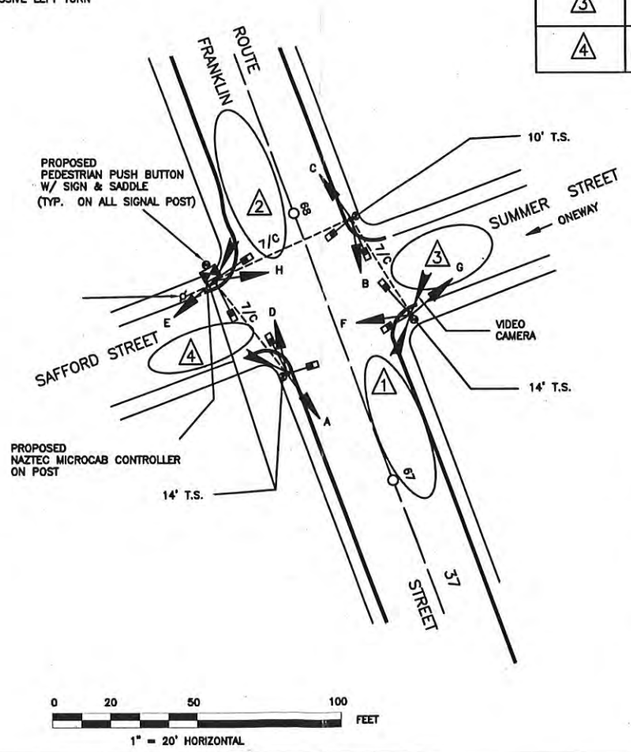


PREFERENTIAL PHASING SEQUENCE



PROTECTIVE LEFT TURN
PERMISSIVE LEFT TURN

TRAFFIC CONTROL SIGNALS MAJOR ITEMS REQUIRED	
QUAN.	DESCRIPTION
1	NAZTEC, MICROCAB CONTROLLER MODEL MC 682 POST MOUNTED 8–ø CABINET
4	VIDEO CAMERA – TRAFFICAM 2nd Generation
8	SIGNAL HEAD, 1–WAY, 3 SECTION, 12" LENS W/ L.E.D. SIGNAL LENSES.
1	10 FT. SIGNAL POST & BASE
3	14 FT. SIGNAL POST & BASE
8	PEDESTRIAN SIGNAL HEADS–12" L.E.D.
4	PEDESTRIAN PUSH BUTTON, SIGN AND SADDLE
1 L.S.	R&S ALL EXIST. T.S. EQUIPMENT
PLUS ALL MISC. EQUIPMENT, CABLE, DUCT, LABOR & INCIDENTIALS NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.	



SIGNAL HEAD DATA	
A,B,C,D,E,F,G,H	ALL
R Y G	
12" LENS	12" L.E.D.

NOTES:

SEQUENCE AND TIMING NOTES:

NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

LEGEND

- SIGNAL CONTROLLER
- VEHICULAR SIGNAL
- VIDEO DETECTOR
- FIRE PRE–EMPTION RECEIVER
- FIRE PRE–EMPTION STROBE LIGHT
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSH BUTTON
- PULL BOX

APPROVED BY:

STATE TRAFFIC ENGINEER Date

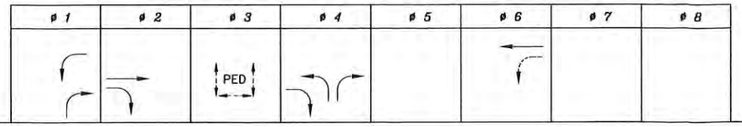
0475P0101.DWG

BRAINTREE
ROUTE 37 AT WASHINGTON ST

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	1078	01	3	

TRAFFIC SIGNAL DATA

APPROX. NORTH



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	FLASH OPER.
WASHINGTON ST (RTE. 37)	NB	C	R	R	R	G	Y	R	R	R		GR	YR	R				R	R	R							FY
WASHINGTON ST (RTE. 37)	NB	D	R	R	R	G	Y	R	R	R		R	R	R				R	R	R							FY
FRANKLIN STREET (RTE. 37)	SB	A	R	R	R	R	R	R	R	R		R	R	R				G	Y	R							FY
FRANKLIN STREET (RTE. 37)	SB	B	GL	YL	R	R	R	R	R	R		R	R	R				G	Y	R							FR
WASHINGTON ST.	WB	E	R	R	R	R	R	R	R	R		G	Y	R				R	R	R							FR
WASHINGTON ST.	WB	F	GR	YR	R	R	R	R	R	R		G	Y	R				R	R	R							FR
PEDESTRIAN	ALL	ALL	DW	DW	DW	DW	DW	DW	W	FDW		DW	DW	DW				DW	DW	DW							OFF
TIMING IN SECONDS																											
MINIMUM GREEN (INITIAL)			5			15						10						15									EMERGENCY ONLY
PASSAGE TIME (VECHICLE)			2			3						2						3									
MAXIMUM 1			8			30						16						30									
MAXIMUM 2			8			30						16						30									
YELLOW CLEARANCE				4			4						4						4								
RED CLEARANCE					1			1						1						1							
WALK (W)									7																		
PEDESTRIAN CLEARANCE										16																	
RECALL			OFF			SOFT			OFF			OFF						SOFT									
MEMORY			LOCKING			NON-LOCKING			LOCKING			NON-LOCKING						NON-LOCKING									

MAJOR ITEMS REQUIRED

QUANTITY	ITEM
1	CONTROLLER TYPE 8DW, CAB.& FDN.
1	SERVICE CONNECTION, TYPE OVERHEAD
2	MAST ARM ASSENBLY, BASE & FDN.
1	10' SIGNAL POLE, BASE, & FDN.
2	8' SIGNAL POLE, BASE & FDN.
3	1 WAY, 3 SECTION, SIGNAL HOUSING (12" LENS)
3	1 WAY, 5 SECTION, SIGNAL HOUSING (12" LENS)
6	PEDESTRIAN HOUSING, FIBER OPTIC
4	PEDESTRIAN PUSH BUTTON, SIGN & SADDLES
3	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
24	ROADWAY LOOP DETECTOR
10	12" X 12" PULL BOX
3	OPTICOM RECEIVERS
2	OPTICOM DUAL CHANNEL PHASE SELECTOR
1	14.4K MODEM
	Necessary duct, cable, labor, miscellaneous
	materiol and equipment to complete the installation.

NOTES:

SEQUENCE AND TIMING NOTES:

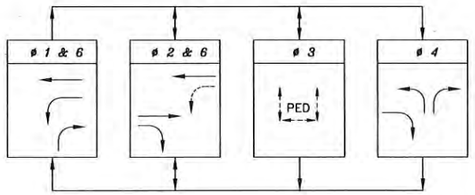
NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

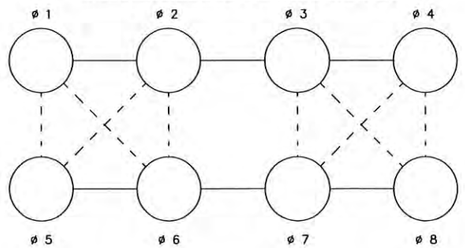
LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEET FROM DESIGN DOCUMENT FOR SPLICE PATTERN AND OTHER INFORMATION.
2. DELAY AND EXTENSION TIMES ARE IN SECONDS.
3. DELAY TIME SHALL BE EFFECTIVE ONLY DURING THE RED PORTION OF THE PHASE THAT IS CALLED BY THE DETECTOR.

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



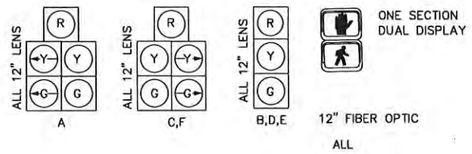
EMERGENCY PRE-EMPTION DATA

APPROACH	PHASE	TIME (SEC)
RTE 37 SB	1&6	MIN 10. MAX 120
RTE 37 NB	2	MIN 10 MAX 120
WASHINGTON ST	4	MIN 10 MAX 120

LOOP DETECTOR DATA

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM. OF TURNS	ø CALLED	ø EXT.	MODE PULSE PRESENCE	DELAY TIME	EXT. TIME
1	4	6'x6'		ø6	ø6	PRESENCE		
2	4	6'x6'		ø1	ø1	PRESENCE		
3	4	6'x6'		ø4	ø4	PRESENCE		
4	4	6'x6'		ø2	ø2	PRESENCE		
5	4	6'x6'		ø2	ø2	PRESENCE		
6	4	6'x6'		ø4	ø4	PRESENCE		

SIGNAL IDENTIFICATION



CONTROLLER MAKE & MODEL:	EPAC 300 GENESIS
UTILITY POLE No.	BEL DEPT 1
METER No.	97 917 894
EMERGENCY PRE-EMPTION (TYPE):	OPTICOM

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

1078D01.DWG

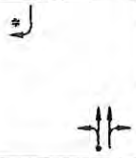
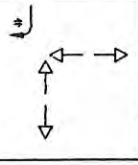
SKETCH LOCATION OF TRAFFIC CONTROL SIGNALS

COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT
10 PARK PLAZA BOSTON, MA.

CITY: Town of Braintree
LOCATION: Washington Street at Pond Street and Frederick Road
Date: 10-17-1995 Permit No.: MB-040-2384

* YIELD CONTROL – NO SIGNAL

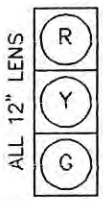
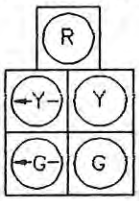
FULLY–ACTUATED ☑	COORDINATED ☑		
SEMI–ACTUATED ☐	WIRE ☐		
PRE–TIMED ☐	TBCU ☑		

Ø1	Ø2	Ø3	Ø4
			

SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	Ø/OL	1	2	3	4	5	6	7	8	9	10	11	12	FLASH OPER.
WASHINGTON STREET	NB	A,C	1/2	G	Y	R	G	Y	R	R	R		R	R	R	FY
WASHINGTON STREET	NB	B	2/1	G	Y	R	G/GL	Y/YL	R	R	R		R	R	R	FY
WASHINGTON STREET	SB	D,E	1	G	Y	R	R	R	R	R	R		R	R	R	FY
POND STREET	EB	F,G	4	R	R	R	R	R	R	R	R		G	Y	R	FR
PEDESTRIAN		P1–P4	3	DW	DW	DW	DW	DW	DW	W	FDW		DW	DW	DW	OUT
TIMING IN SECONDS																
MINIMUM INITIAL				5			2						6			EMERGENCY
PASSAGE				4			2						2			
MAXIMUM 1 FREE				33			14						28			
MAXIMUM 2 COORDINATED				25			5						18			
CHANGE					4	1		4	1					3	1	
PEDESTRIAN										7	11					
RECALL				OFF			OFF			OFF			OFF			
MEMORY				LOCKING			NON–LOCKING			LOCKING			NON–LOCKING			

PROPOSED SIGNALS

A,C,D,E,F,G	$P_1 - P_4$	B
		

NOTE: RETAIN ALL EXIST. SIGNALS AND REMOVE & RELOCATE SIGNAL HEAD A. REPLACE SIGNAL HEAD B WITH A 5–SECTIONS "DOG HOUSE".

TRAFFIC CONTROLLER DATA

PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	SINGLE
DUAL ENTRY	OFF
SIMULTANEOUS GAP OUT DISABLED	YES
ALL RED REST	OFF
RED REVERT–# OF SECONDS	–
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED
TYPE OF INTERCONNECT TO MASTER	NONE – TBCU
REMOTE MUTCD FLASH BY MASTER	NO
COORDINATION MODE	PERM
MAXIMUM MODE	INHIBIT
OFFSET SEEK METHOD	SHORTWAY

TOWN OF BRAINTREE

WASHINGTON STREET AT POND STREET AND FREDERICK ROAD

SCALE: 1"=40'	DATE:
DRAWN BY: EES	
APPROVED BY: RCE	

TABLE 1–M2. MASTER PROGRAM – SUB–SYSTEM #2 – INCLUDES INTERSECTIONS 4,5,6,7,8

FUNCTION	*MONDAY → FRIDAY*	*SATURDAY*	*SUNDAYS & HOLIDAYS*
FREE OPERATION FULLY ACTUATED	*	*	*
CYCLE 1 – **80"** WEEKDAY PM PEAK	4:00 pm → 6:00 pm	–	–
CYCLE 2 – **90"** SAT MIDDAY PEAK	–	11:00 am → 3:00 pm	–
FLASH	–	–	–

* = DEFAULT. MASTER SHALL USE THIS FUNCTION UNLESS A TIME IS SHOWN FOR ANOTHER FUNCTION.

FOR INITIAL OPERATION, CYCLE 1 INCLUDES SPLIT 1 + OFFSET 1.

TABLE 2–5. COORDINATION DATA FOR INTERSECTION 5 – (SUB–SYSTEM 2)

FUNCTION	PURPOSE	OFFSET VALUE IN SECONDS	CYCLE LENGTH	–
OFFSET 1	WEEKDAY PM PEAK HOUR VOLUMES	14	80	–
OFFSET 2	SATURDAY MIDDAY PEAK HOUR VOLUMES	14	90	–

COORD POINT SHALL BE AT THE START OF THE GREEN OF THE FIRST PHASE, SHOWN BY * BELOW.

MAXIMUM PHASE TIME IN SECONDS

FUNCTION	PHASE 1 *	PHASE 2	PHASE 3	PHASE 4
SPLIT 1	30	10	18	22
SPLIT 2	37	10	18	25

APPROX. NORTH

ø 1	ø 2	ø 3	ø 4	ø 5	ø 6	ø 7	ø 8	RR 1	RR 2	RR 3
Hanc SB	Hanc NB	PED	Wash EB	Hanc NB	Hanc SB		Plain WB	TT	TRAIN TT	TRAIN TT

RAILROAD PREEMPTION

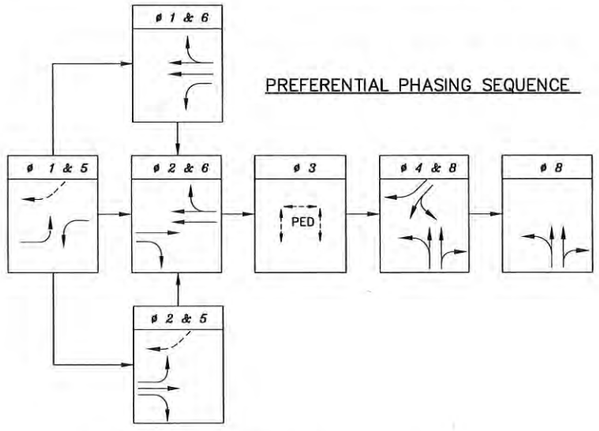
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26										FLASH OPER.
HANCOCK ST. (RTE 37)	NB	A	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL				RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	FRL
HANCOCK ST. (RTE 37)	NB	B,C	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R	R	R	R	R	GV	GV	GV	GV	Y	R	FY
HANCOCK ST. (RTE 37)	NB	D	RR	RR	RR	GR	YR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR				RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	FYR
HANCOCK ST.	SB	E	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL				RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL
HANCOCK ST.	SB	F,G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R				R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FY
PLAIN ST.	WB	H,I	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				G	G	Y	Y	R	G	G	Y	Y	R	R	R	R	R	R	R	FR
PLAIN ST.	WB	J,K	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				G	Y	Y	R	R	G	Y	Y	R	R	R	R	R	R	R	R	FR
WASHINGTON ST (ROUTE 37)	EB	N,Q	RR	RR	RR	RR	RR	RR	RR	RR	RR	G	Y	R	GR	YR	RR	RR	RR	RR				RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	GR	YR	RR	RR	RR	FRR
WASHINGTON ST (ROUTE 37)	EB	L,M	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R				R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN	ALL	P1–P6	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW				DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
TIMING IN SECONDS																																								EMERGENCY ONLY
MINIMUM GREEN (INITIAL)			5			5						5			5			5						5					5					5			5			
PASSAGE TIME (VECHICLE)			2			3						3			2			3						3					–					3			3			
MAXIMUM 1			17			30						13			36			10						26	2				5	2				21			12			
MAXIMUM 2			15			11						34			14			14						47	2				5	2				16			17			
YELLOW CLEARANCE				3			3						3			4			3						2					2					4			4		
RED CLEARANCE					2			2						2			2			2						2						1	2	2			2			2	
WALK (W)									4																															
PEDESTRIAN CLEARANCE										25	1																													
RECALL				OFF			SOFT			OFF			OFF			OFF			SOFT						OFF					OFF					OFF			OFF			
MEMORY				NON–LOCKING			LOCKING			NON–LOCKING			NON–LOCKING			NON–LOCKING			LOCKING						NON–LOCKING					NON–LOCKING					NON–LOCKING			NON–LOCKING			

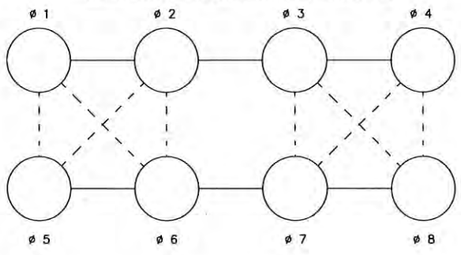
LOOP DETECTOR DATA

DETECTOR NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	ø CALLED	ø EXT.	MODE PULSE PRESENCE	DELAY TIME	EXT. TIME
①	2	6'x10'	3	ø 5	ø 5	PRESENCE	–	–
②	2	6'x6'	3	ø 2	ø 2	PULSE	–	–
③	2	6'x6'	3	ø 2	ø 2	PRESENCE	–	–
④	4	6'x6'	3	ø 1	ø 1	PRESENCE	–	–
⑤	2	6'x6'	3	ø 6	ø 6	PULSE	–	–
⑥	2	6'x6'	3	ø 6	ø 6	PRESENCE	–	–
⑦	4	6'x6'	3	ø 4	ø 4	PRESENCE	6	–
⑧	4	6'x6'	3	ø 4	ø 4	PRESENCE	–	–
⑨	4	6'x6'	3	ø 8	ø 8	PRESENCE	–	–
⑩	4	6'x6'	3	ø 8	ø 8	PRESENCE	–	–

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



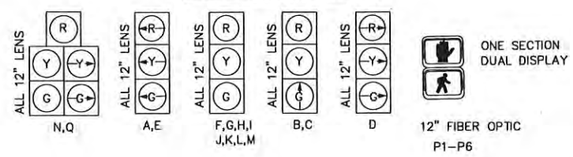
EMERGENCY PRE–EMPTION DATA

APPROACH	PHASE	TIME (SEC)
RAIL ROAD	ø5 ø2 & ø6	MIN 30 MAX 199
HANCOCK ST NB	ø2 & ø5	MIN 10 MAX 199
HANCOCK ST SB	ø1 & ø6	MIN 10 MAX 199
WASHINGTON ST WB	ø4	MIN 10 MAX 199
WASHINGTON ST EB	ø8	MIN 10 MAX 199

MAJOR ITEMS REQUIRED

QUANTITY	ITEM
1	CONTROLLER TYPE 8DW, CAB.& FDN.
1	SERVICE CONNECTION, OVERHEAD
1	SPAN WIRE ASSEMBLY BASE & FDN.
2	8' SIGNAL POLE, BASE, & FDN.
3	10' SIGNAL POLE, BASE, & FDN.
5	1 WAY, 3 SECTION, SIGNAL HOUSING (12" LENS)
2	1 WAY, 5 SECTION, SIGNAL HOUSING (12" LENS)
3	2 WAY, 3 SECTION, SIGNAL HOUSING (12" LENS)
6	PEDESTRIAN HOUSING FIBER OPTIC
4	PEDESTRIAN PUSH BUTTON, SIGN & SADDLES
5	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
30	ROADWAY LOOP DETECTOR
4	EMERGENCY VEHICLE PREEMPTION DETECTOR W/BEACON (COLOR: WHITE)
2	PHASE SELECTOR (2 CHANNEL)
15	12" X 12" PULL BOX
	Necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

SIGNAL IDENTIFICATION



BRAINTREE
RTE. 37 AT HANCOCK ST & PLAIN ST

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	0933	02	3	

TRAFFIC SIGNAL DATA

NOTES:

SEQUENCE AND TIMING NOTES:

1. MAX II TIMING TO BE ACTIVATED FROM 3:00 PM TO 7:00 PM. MON–FRI. ONLY.
2. THE EMERGENCY VEHICLE PREEMPTION DETECTOR WILL CALL THE APPROPRIATE PHASE (NOTED AS SB FIRE RUN) FORCING OFF OTHER PHASES–EXCEPT WHEN RAILROAD PREEMPTION HAS BEEN ACTIVATED. THIS DETECTOR WILL BE COMPATIBLE WITH OTHER BRAINTREE EMERGENCY DETECTOR.
3. FLASHING OPERATION SHALL OPERATE ACCORDING TO SECTION 4B–18 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. EXCLUSIVE PEDESTRIAN PHASE SHALL BE PUSH BUTTON ACTUATED ONLY.
5. THE PEDESTRIAN PHASE CALL SHALL BE OMITTED AFTER RAILROAD AND/OR EMERGENCY PREEMPTION.

NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEET FROM DESIGN DOCUMENT FOR SPLICE PATTERN AND OTHER INFORMATION.
2. DELAY AND EXTENSION TIMES ARE IN SECONDS.
3. DELAY TIME SHALL BE EFFECTIVE ONLY DURING THE RED PORTION OF THE PHASE THAT IS CALLED BY THE DETECTOR.

SIGNAL IDENTIFICATION NOTES:

1. ALL SIGNAL HEADS SHALL FIXED MOUNTED.
2. ALL SIGNAL POSTS SHALL HAVE SHOE BASES.
3. ALL OVERHEAD CONDUCTORS FOR SIGNAL HOUSINGS SHALL BE STRANDED WIRE.
4. J,K ARE EXISTING SIGNALS TO BE REUSED.
5. ALL OTHERS ARE PROPOSED.
6. H,I ARE OPTICALLY PROGRAMMED.

REVISION NO. 02 DATE: 05–17–99

INSERT BY: D. Z. LOPEZ

FILE NAME: 0933D02.DWG

CONTROLLER MAKE & MODEL: EPAC 300 GENESIS
UTILITY POLE No. BEL DEPT
METER No. 26 784 251
EMERGENCY PRE–EMPTION (TYPE): OPTICOM + RR

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

SEQUENCE AND TIMING FOR FULLY – ACTUATED TRAFFIC SIGNAL CONTROL

STREET	DIR	HOUSING	Ø1			Ø2			Ø3			Ø7			Ø6			Ø7			Ø8			Ø9			FLASHING OPERATION	ØF1			ØF2			ØF3		
			OL						NOT USED									NOT USED																		
WASHINGTON ST	SB	A, B	R	R	R	G	Y	R				R	R	R	R	R	R				R	R	R	R	R	R	Y	R	R	R	G	Y	R	R	R	R
WASHINGTON ST	NB	C	(G)/R	(Y)/R	R	R	R	R				R	R	R	G	Y	R				R	R	R	R	R	R	Y	G	Y	R	R	R	R	R	R	R
WASHINGTON ST	NB	D	R	R	R	R	R	R				R	R	R	G	Y	R				R	R	R	R	R	R	Y	G	Y	R	R	R	R	R	R	R
BRAXTON ST	EB	F	(G)/R	(Y)/R	R	R	R	R				G/(G)	Y/(Y)	R	R	R	R				R	R	R	R	R	R	R	R	R	R	R	R	R	G/(G)	Y/(Y)	R
BRAXTON ST	EB	E	R	R	R	R	R	R				G	Y	R	R	R	R				R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R
DRIVEWAY	WB	G, H	R	R	R	R	R	R				R	R	R	R	R	R				G	Y	R	R	R	R	OUT	R	R	R	R	R	R	R	R	R
PEDESTRIAN	ALL	P1–P4	DW	DW	DW	DW	DW	DW				DW	DW	DW	DW	DW	DW				DW	DW	DW	W	FDW	DW	R	DW	DW	DW	DW	DW	DW	DW	DW	DW

INTERVALS (IN SECONDS)																											EMERGENCY ONLY									
	MINIMUM GREEN		4			8						4			8						2			17				5			5			5		
	EXTENSION INTERVAL		2			2						2			2						1			–												
	MAXIMUM I		10			55						10			70						5			–												
	MAXIMUM II		7			78						10			90						5			–												
	CLEARANCE INTERVAL			4	1		4	1					4	1		4	1					4	1		–	–		4	1		4	1		4	1
	"WALK" INTERVAL		–			–						–			–									7												
	PED CLEARANCE INTERVAL		–			–						–			–											10										

	DETECTOR MEMORY		NON–LOCK			NON–LOCK						NON–LOCK			NON–LOCK						NON–LOCK			LOCK												
	RECALL SWITCH		OFF			MAXIMUM						OFF			MAXIMUM						OFF			OFF												
	CYCLE 1																																				
	CYCLE 2																																				
	CYCLE 3																																				

EMERGENCY PRE–EMPTION

PROGRAM/COORDINATION

MAXIMUM SETTING		OFFSET % / SEC		HOURS OF OPERATION
1	–	–	–	MAX I
2	–	–	–	MAX II
3	–	–	–	MAX III
COORDINATED OPERATION				NONE
FREE OPERATION				24 HOURS/7 DAYS
PROGRAMMED FLASH				NONE

CLEARANCES

FROM	TO					
	G	R	W	DW	RR	RL
G	--	Y	--	--	--	--
GL	YL	YL	--	--	--	--
GR	YR	YR	--	--	--	--
GV/GL	--	--	--	--	--	--
GV/GR	--	--	--	--	--	--
W	--	--	--	FDW	--	--

TECHNICAL NOTES

MAXIMUM I: 7:00 AM – 2:00 PM

MAXIMUM II: 2:00 PM – 7:00 PM

SIGNAL PLAN

COMMONWEALTH OF MASSACHUSETTS

HIGHWAY DEPARTMENT

10 PARK PLAZA BOSTON, MA

TOWN: BRAINTREE

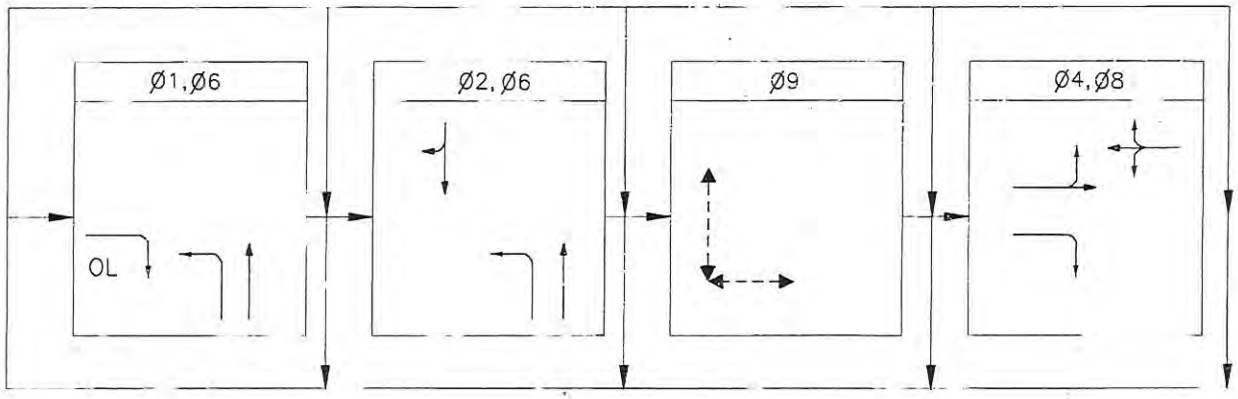
LOCATION: ROUTE 37 AT BRAXTON STREET

DATE: 4/29/08 PERMIT NO.

SCALE: N.T.S.

DRAWN BY: WJG

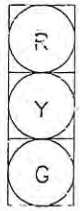
APPROVED: FAM



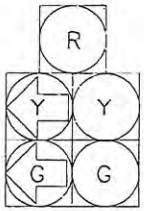
VEHICULAR MOVEMENT

PEDESTRIAN MOVEMENT

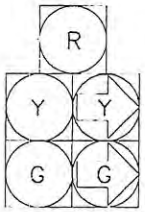
PREFERENTIAL PHASING SEQUENCE



A, B, D,
E, G, H



C



F

P1 – P4

SIGNAL PLAN		
COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT 10 PARK PLAZA BOSTON, MA	TOWN: BRAINTREE LOCATION: ROUTE 37 AT BRAXTON STREET DATE: 4/29/08 PERMIT NO.	SCALE: N.T.S. DRAWN BY: WJG APPROVED: FAM

Calculation of Yellow Change Interval and All-Red Clearance Interval

Job: Job Number:
Location: Route 37 at Braxton Street Date: 6/25/2007
Title: Braintree

Intersection Approach			
1	2	3	4
WB LT	EB	NB LT	SB
Input Data	Input Data	Input Data	Input Data
V(mph) = 0	V(mph) = 35	V(mph) = 35	V(mph) = 35
W (ft) = 0.0	W (ft) = 70.0	W (ft) = 65.0	W (ft) = 75.0
Calculated Values	Calculated Values	Calculated Values	Calculated Values
Y(sec) = n/a	Y(sec) = 3.6	Y(sec) = 3.6	Y(sec) = 3.6
AR (sec) = n/a	AR (sec) = 1.7	AR (sec) = 1.7	AR (sec) = 1.8
Intersection Approach			
5	6	7	8
EB LT	WB	SB LT	NB
Input Data	Input Data	Input Data	Input Data
V(mph) = 35	V(mph) = 0	V(mph) = 0	V(mph) = 35
W (ft) = 70.0	W (ft) = 0.0	W (ft) = 0.0	W (ft) = 65.0
Calculated Values	Calculated Values	Calculated Values	Calculated Values
Y(sec) = 3.6	Y(sec) = n/a	Y(sec) = n/a	Y(sec) = 3.6
AR (sec) = 1.7	AR (sec) = n/a	AR (sec) = n/a	AR (sec) = 1.7

Based on the following equation: [1]

$$CP = t + \frac{V}{2a} + \frac{W+L}{V}$$

Yellow Change Interval — All-Red Clearance Interval

Where CP = Nondilemma change period (yellow plus all red), s
t = Driver perception-reaction time, s
V = Approach speed (posted speed limit plus 5 mph), ft/s
a = Deceleration rate of vehicle, ft/s^2
W= Width of intersection, ft
L = Length of vehicle, ft

Assumptions: t = 1s
a = 10 ft/s^2
L = 20 ft

[1] Manual of Traffic Signal Design, Second Edition; Institute of Transportation Engineers; Washington, DC; 1988.

BRAINTREE
WASHINGTON ST. AT SOUTH ST.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	12
PROJECT FILE NO.	611958		

TRAFFIC SIGNAL PLANS

611958 - HD1 - TRAF - SIGNAL.DWG Plotted on 12-Oct-2021 11:24 AM

PROP 10' TS POST & FDN
W/ PROP ONE-WAY 3-SECTION SIGNAL HEAD

PROP TS POLE & FDN
W/ 40' MAST ARM
W/ PROP ONE-WAY 3-SECTION SIGNAL HEADS (2)
W/ PROP TWO-WAY 3-SECTION SIGNAL HEAD
W/ MA-D3-1a (SOUTH ST) (2) MNTD BTB
W/ MA-D3-1b (WASHINGTON ST)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(L)

PROP CONTROL CABINET
W/ DOOR HINGE ON RIGHT SIDE
W/ PROP CONCRETE PAD
W/ TS2 TYPE 1 CONTROLLER (SIEMENS M60)
W/ PROP ANCILLARY EQUIPMENT
W/ NEW INTERSECTION CABLING

PROP 3' MIN
ADA ACCESABLE (HMA or CC) WALK
CONNECT TO CONTROL
CABINET PAD

PROP 10' TS POST & FDN
W/ PROP TWO-WAY 3-SECTION SIGNAL HEAD
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(R)

PROP SERVICE
CONNECTION W/ RISER

12" X 12" PULL-BOX (TYP)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(R)

12" X 24" EHH
(TYP)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(L)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(R)

PROP EMERGENCY
VEHICLE DETECTOR (TYP)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(L)

MAINTAIN MINIMUM CLEARANCE FROM
OVERHEAD UTILITY WIRE

PROP SINGLE POINT
VIDEO DETECTION CAMERA

PROP EMERGENCY PREEMPTION STROBE

PROP 3-SECTION
SIGNAL HEAD (TYP)

PROP VIDEO
DETECTION ZONE (TYP)

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(L)

PROP 3" TRAFFIC
SIGNAL CONDUIT (TYP)

PROP 10' TS POST & FDN
W/ PROP TWO-WAY 3-SECTION SIGNAL HEAD

PROP 8' TS POST & FDN
W/ PROP PED SIGNAL HEAD
W/ PROP PED PUSH BUTTON & R10-3e(L)

+44.62
PC

+44.05
PT

6' STOCKADE

BUS

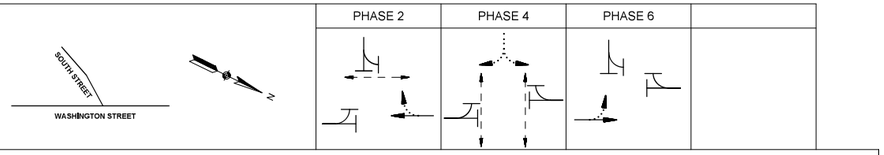
BUS

N 788250
E 2889250

0 10 20 30 40
SCALE: 1" = 10'

TRAFFIC SIGNAL NOTES:

1. LADDER STYLE CROSSWALK MARKINGS NOT SHOWN ON THIS SHEET FOR VISUAL CLARITY
2. THE CONSTRUCTION SHALL CONFORM WITH MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. ALL PROPOSED TRAFFIC SIGNAL POLE AND MAST ARM FOUNDATIONS SHALL COMPLY TO THE LATEST MASSDOT STANDARDS INCLUDING THE "OVERHEAD SIGNAL STRUCTURE & FOUNDATION STANDARD DRAWINGS" (2015) & "STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING" (1968) AS APPLICABLE
4. ALL BORING HOLES NECESSARY FOR THE DESIGN OF THE MAST ARM FOUNDATION SHALL BE COMPLETED BY THE CONTRACTOR
5. MAST ARM POLES AND FOUNDATIONS MAY NEED TO BE INSTALLED WITH LOW-PROFILE INSTALLATION AND/OR EXCAVATION EQUIPMENT DUE TO CLOSE PROXIMITY WITH EXISTING OVERHEAD PRIMARY POWER LINES.
6. CONTRACTOR IS RESPONSIBLE FOR AND SHALL COORDINATE WITH UTILITY COMPANY FOR THE SHIELDING AND INSULATION OF TRAFFIC SIGNAL EQUIPMENT AND OVERHEAD HEAD WIRES (AS NECESSARY).
7. PEDESTRIAN PUSH BUTTONS SHALL BE PERPENDICULAR TO THE CROSSWALK PATH OF TRAVEL, WITH THE ARROW PROVIDED ON THE PUSH BUTTON PARALLEL TO THE CROSSWALK PATH OF TRAVEL.
8. WHERE TWO APS PEDESTRIAN PUSH BUTTONS ARE NOT SEPARATED BY MORE THAN 10 FEET, THE AUDIBLE WALK INDICATION SHALL BE A SPEECH WALK MESSAGE.
9. ALL PROPOSED CONCRETE PULL BOX FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SIGNAL & LIGHTING STANDARDS.
10. PULL BOXES SHALL NOT BE LOCATED WITHIN THE ACCESSIBLE RAMPS.
11. ALL PULL-BOXES WITH 4 OR MORE CONDUITS CONNECTED SHALL BE CHANGED TO A 12" X 24" EHH
12. BEST LOCATION FOR SINGLE POINT VIDEO DETECTION CAMERA SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER
12. BEST LOCATION FOR THE EMERGENCY PREEMPTION STROBE AND THE EMERGENCY VEHICLE DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND THE LOCAL FIRE DEPARTMENT
13. VIDEO DETECTION ZONES SHALL BE ADJUSTED IN THE FIELD IN PRESENCE OF THE ENGINEER.
14. NEW DRAINAGE INFRASTRUCTURE NOT SHOWN FOR VISUAL CLARITY OF TRAFFIC SIGNAL EQUIPMENT.
15. SEE SHEET 9 FOR TRAFFIC SIGNAL TIMING PLANS



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	FLASH OPER.
WASHINGTON STREET	NB	D, E, F	R	R	R	R	R	R	R	R	R	G	Y	R					FY
WASHINGTON STREET	SB	G, H, J	R	G	Y	R	R	R	R	R	R	R	R	R					FY
SOUTH STREET	EB	A, B, C	R	R	R	R	R	G	Y	R	R	R	R	R					FR
PEDESTRIAN SIGNAL HEADS	E - W	P1, P2, P7, P8	DW	DW	DW	DW	W	W/FDW	DW	DW	DW	DW	DW	DW					OUT
PEDESTRIAN SIGNAL HEADS	N - S	P3, P4, P5, P6	W	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW					
TIMING IN SECONDS																			
MINIMUM GREEN (INITIAL)				6				6				6							EMERGENCY ONLY
PASSAGE TIME (VEHICLE)				3				3				3							
MAXIMUM 1 (MON - FRI / 3:00 PM - 7:00 PM)				75				20				75							
MAXIMUM 2 (ALL OTHER TIMES)				45				20				45							
YELLOW CHANGE					4.5				4				4.5						
RED CLEARANCE						3				2				3					
WALK (W)			4	3			4	3											
PEDESTRIAN CLEARANCE				10	3	- -		10	3	- -									
RECALL				SOFT				NONE				SOFT							
MEMORY				NON-LOCK				NON-LOCK				NON-LOCK							

QUANTITY	MAJOR ITEMS LIST
3	ELECTRIC HANDHOLE - SD2.022
6	PULL BOX 12 X 12 INCHES - SD2.031
1	NEMA SIZE 6, TS-2 TYPE-1 CONTROLLER (SIEMENS M60), CABINET & FDN.
7	8' TS POST, BASE & FDN
3	10' TS POST, BASE & FDN
8	16" L.E.D COUNTDOWN PEDESTRIAN SIGNAL HEAD
5	APS PUSHBUTTON,W/ R10-3e(L) & SIGN SADDLE
3	APS PUSHBUTTON,W/ R10-3e(R) & SIGN SADDLE
1	TYPE II 40' STEEL MAST ARM, AND FOUNDATION
3	1-WAY, 3-SECTION SIGNAL HEAD, 12" L.E.D LENS (W/ VISORS), NON-LOUVERED BACKPLATES AND 3" YELLOW RETRO-REFLECTIVE STRIP
3	2-WAY, 3-SECTION SIGNAL HEAD, 12" L.E.D LENS (W/ VISORS), NON-LOUVERED BACKPLATES AND 3" YELLOW RETRO-REFLECTIVE STRIP
1	SERVICE CONNECTION AND METER
1	SINGLE POINT VIDEO DETECTION (SPVD) SYSTEM WITH ONE CAMERA
1	16-CHANNEL MMU (CAPABLE OF FYA OPERATION)
1	EMERGENCY PRE-EMPTION CONFIRMATION STROBE (WHITE)
3	OPTICAL SINGLE CH. ONE-DIRECTION OPTICAL DETECTOR
1	OPTICAL FOUR CH. PHASE SELECTOR
1	TRANSIT SIGNAL PRIORITY (APPLIED INFORMATION GLANCE TSP 15-YEAR PLAN PER MBTA SPEC)

PLUS NECESSARY CONDUIT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL

BRAINTREE
WASHINGTON ST. AT SOUTH ST.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	12
PROJECT FILE NO.	611958		

TRAFFIC SIGNAL DATA

VIDEO DETECTOR DATA

DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

ZONE NUMBER	CAMERA NUMBER	SIZE	Ø CALLED	Ø EXT.	MODE	DELAY TIME	EXT. TIME
1	V1	±8' X 50'	6	6	PRESENCE	0	0
2	V1	±4' X 15'	6	6	PRESENCE	0	0
3	V1	±20' X 25'	4	4	PRESENCE	0	0
4	V1	±4' X 15'	2	2	PRESENCE	0	0
5	V1	±8' X 50'	2	2	PRESENCE	0	0

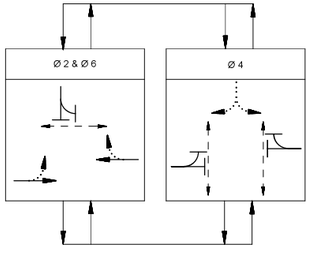
FIRE PREEMPTION SCHEDULE

APPROACH	PREEMPTION PHASE	NEXT PHASE CALLED
EASTBOUND	4	2+6
NORTHBOUND	6	2+6
SOUTHBOUND	2	2+6

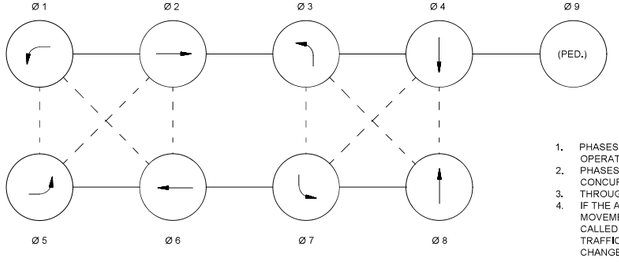
EMERGENCY VEHICLE PREEMPTION OPERATION:

1. EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
2. PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES, THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
4. PREEMPTION MINIMUM GREENS SHALL BE SIX SECONDS.
5. NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
6. ACTUAL TIMMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY MHD PRIOR TO OPERATION.

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:

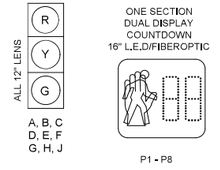


1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

SEQUENCE & TIMING NOTES

1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12.
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. FR = FLASH RED, FY = FLASH YELLOW, FYA = FLASHING YELLOW ARROW
4. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
5. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CHANGE AND CLEARANCE INTERVALS.
6. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES.
7. IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
8. PEDESTRIAN PHASES WILL ONLY BE CALLED UPON PUSH BUTTON ACTIVATION.
9. DURING PED INTERVALS, FDW THRU YELLOW OPERATION SHALL NOT BE IN EFFECT

SIGNAL IDENTIFICATION



NOTES:

1. ALL SIGNALS SHALL HAVE CUT AWAY VISORS.
2. SIGNALS SHALL HAVE 12" LED WITH 5" NON-LOUVERED BACK PLATES, WITH 3" YELLOW RETRO-REFLECTVE STRIP

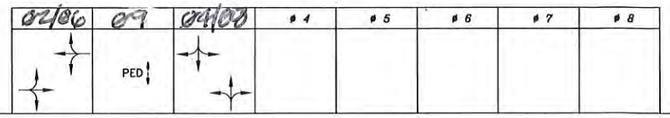
611958 - HD1 - TRAF - SIGNAL.DWG Plotted on 12-Oct-2021 11:24 AM

BRAINTREE
ROUTE 37 AT ROOSEVELT STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	1080	01	3	3

TRAFFIC SIGNAL DATA

AS OF 10/30/01



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	FLASH OPER.
WASHINTON STREET (RTE. 37)	NB	A,B,C	G	Y	R	R	R	R	R	R	R																FY
WASHINTON STREET (RTE. 37)	SB	D,E	G	Y	R	R	R	R	R	R	R																FY
ROOSEVELT ST	EB	F,G	R	R	R	R	R	R	G	Y	R																FR
PRIVATE DRIVE	WB	H,I	R	R	R	R	R	R	G	Y	R																FR
PEDESTRIAN	ALL	P1–P2	DW	DW	DW	W	FDW	DW	DW	DW	DW																OFF
TIMING IN SECONDS																											
MINIMUM GREEN (INITIAL)			30						8																		
PASSAGE TIME (VECHICLE)									2.4																		
MAXIMUM 1									12																		
MAXIMUM 2																											
YELLOW CLEARANCE				4						3																	
RED CLEARANCE					2						1																
WALK (W)						7																					
PEDESTRIAN CLEARANCE							11	1																			
RECALL				MIN			OFF			OFF																	EMERGENCY ONLY
MEMORY				LOCK			LOCK			NON–LOCK																	
DELAY (PRESENCE MODE)										5 SECONDS																	

MAJOR ITEMS REQUIRED

QUANTITY	ITEM
1	CONTROLLER TYPE BDW, TS 2, TYPE I
	W /CABINET & FOUNDATION
1	35 FOOT MAST. ARM TYPE II
9	1–WAY, 3 SECTION 12" LED SIGNAL HOUSING
2	TYPE B, LED INTL. SYMBOL PEDESTRIAN HOUSING
8	TUNNEL VISORS
8	LOUVERED BACKPLATES
1	2–WAY OPTICOM SYSTEM SERIES 400
3	12" X 12" PULL BOX
1	6' X 6' WIRE LOOP DETECTOR
1	6' X 30' QUADRAPOLE LOOP DETECTOR
1	2 CHANNEL WIRE LOOP AMPLIFIER
1	1 WHITE CONFIRMATION STROBE
2	PEDESTRIAN PUSHBUTTONS W/LED.
2	10' SIGNAL POST R&R
2	R10–6 SIGN WITH P5 POST
1	PAVEMENT MARKING REMOVAL AND INSTALLATION
1	LANDSCAPE, LOW PLANTINGS AND MULCH AREA
	Necessary duct, cable, labor, miscellaneous
	material and equipment to complete the installation.

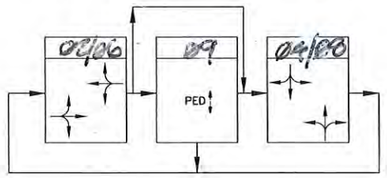
NOTES:

1. R&R EXISTING 10' SIGNAL POSTS FROM THE EXISTING FLASHERS. REMOVE FOUNDATIONS AND ELECTRIC SERVICE. RESET PEDESTRIAN SIGNS ON NEW P5 POSTS AT SAME LOCATIONS.
2. PROVIDE LANDSCAPE AREA WITH MULCH AND LOW PLANTINGS AROUND MAST ARM BASE.
3. R&R EXISTING ELDERLY HOUSING SIGN.
4. OPTICOM TO CALL PHASE 1
5. TRIM TREES AS NECESSARY.
6. CHECK ELEVATION OF UTILITY WIRE FOR PROPER MAST ARM HEIGHT.
7. UNDERGROUND UTILITIES ARE PRESENT. CALL DIGSAFE.
8. REMOVE EXISTING CROSSWALK AND DYCL ON RTE. 37 AS NECESSARY. INSTALL NEW CROSSWALK AND STOP LINES AS SHOWN.
9. INSTALL TWO (2) R10–6 W/P5 POSTS AS SHOWN.

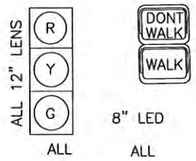
CONSTRUCTION NOTES:

*1. SAW CUT AND PATCH DETERIATED PAVEMENT ON ROOSEVELT PRIOR TO INSTALLING LOOP DETECTOR.

PREFERENTIAL PHASING SEQUENCE



SIGNAL IDENTIFICATION



CONTROLLER MAKE & MODEL:	XXXX
UTILITY POLE No.	XXXX
METER No.	XXXX
EMERGENCY PRE–EMPTION (TYPE):	XXXX

APPROVED BY:

STATE TRAFFIC ENGINEER Date

1080 ~~SHT~~ 002

Appendix D

Intersection Level of Service Analysis

1: 2023 Existing Conditions: Weekday AM Peak-Hour LOS and Delays

2. 2023 Existing Conditions: Weekday PM Peak-Hour LOS and Delays

3. 2023 Existing Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

4. 2035 No Build Conditions: Weekday AM Peak-Hour LOS and Delays

5. 2035 No Build Conditions: Weekday PM Peak-Hour LOS and Delays

6. 2035 No Build Conditions: Weekend Saturday PM Peak-Hour LOS and

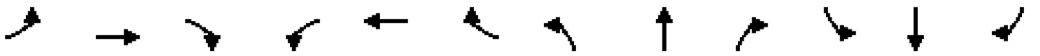
7. 2035 Build Conditions: Weekday AM Peak-Hour LOS and Delays

8. 2035 Build Conditions: Weekday PM Peak-Hour LOS and Delays

9. 2035 Build Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

10. Traffic Signal Warrant Analysis

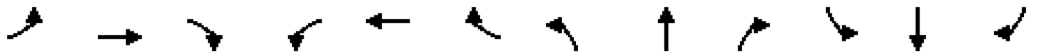
Part 1: Existing Conditions: Weekday AM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Future Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	11	106	64	11	32	404	872	372	128	532	138
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	155	33	395	134	45	132	490	1526	647	156	1592	411
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.14	0.64	0.64	0.09	0.58	0.58
Sat Flow, veh/h	880	304	1560	1255	415	1208	3401	2392	1015	1753	2751	711
Grp Volume(v), veh/h	54	0	106	64	0	43	404	636	608	128	337	333
Grp Sat Flow(s),veh/h/ln	1183	0	1560	1255	0	1623	1700	1749	1658	1753	1749	1713
Q Serve(g_s), s	3.3	0.0	6.0	5.6	0.0	2.7	12.7	22.8	23.0	7.9	11.1	11.2
Cycle Q Clear(g_c), s	6.0	0.0	6.0	11.5	0.0	2.7	12.7	22.8	23.0	7.9	11.1	11.2
Prop In Lane	0.80		1.00	1.00		0.74	1.00		0.61	1.00		0.41
Lane Grp Cap(c), veh/h	188	0	395	134	0	177	490	1116	1058	156	1012	991
V/C Ratio(X)	0.29	0.00	0.27	0.48	0.00	0.24	0.82	0.57	0.57	0.82	0.33	0.34
Avail Cap(c_a), veh/h	188	0	395	134	0	177	819	1116	1058	239	1012	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	0.0	32.9	51.8	0.0	44.8	45.7	11.3	11.4	49.2	12.1	12.1
Incr Delay (d2), s/veh	0.8	0.0	0.4	2.6	0.0	0.7	2.9	1.7	1.8	12.2	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.9	0.0	1.1	5.5	8.7	8.4	4.0	4.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.8	0.0	33.3	54.4	0.0	45.5	48.6	13.0	13.2	61.5	13.0	13.0
LnGrp LOS	D		C	D		D	D	B	B	E	B	B
Approach Vol, veh/h		160			107			1648			798	
Approach Delay, s/veh		38.2			50.8			21.8			20.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.8	75.2		18.0	23.4	68.6		18.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	15.0	65.0		12.0	26.5	53.0		12.0				
Max Q Clear Time (g_c+I1), s	9.9	25.0		8.0	14.7	13.2		13.5				
Green Ext Time (p_c), s	0.1	11.8		0.2	1.2	4.8		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			23.6									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Future Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	179	0	0	10	10	10	469	1367	10	10	459	0
Peak Hour Factor	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	365	0		70	62	44	537	2606	19	21	2050	
Arrive On Green	0.08	0.00	0.00	0.08	0.08	0.08	0.16	0.74	0.74	0.02	1.00	0.00
Sat Flow, veh/h	2718	0	1547	327	756	541	3374	3530	26	1739	3469	1547
Grp Volume(v), veh/h	179	0	0	30	0	0	469	672	705	10	459	0
Grp Sat Flow(s),veh/h/ln	1359	0	1547	1624	0	0	1687	1735	1821	1739	1735	1547
Q Serve(g_s), s	4.8	0.0	0.0	0.0	0.0	0.0	14.9	18.2	18.2	0.6	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	0.0	1.8	0.0	0.0	14.9	18.2	18.2	0.6	0.0	0.0
Prop In Lane	1.00		1.00	0.33		0.33	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	365	0		176	0	0	537	1280	1344	21	2050	
V/C Ratio(X)	0.49	0.00		0.17	0.00	0.00	0.87	0.52	0.52	0.48	0.22	
Avail Cap(c_a), veh/h	625	0		326	0	0	613	1280	1344	95	2050	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.72	0.72	0.72	0.95	0.95	0.00
Uniform Delay (d), s/veh	49.2	0.0	0.0	47.2	0.0	0.0	45.2	6.2	6.2	53.3	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.5	0.0	0.0	9.1	1.1	1.1	15.4	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.8	0.0	0.0	6.9	6.0	6.3	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.3	0.0	0.0	47.7	0.0	0.0	54.2	7.3	7.2	68.8	0.2	0.0
LnGrp LOS	D			D			D	A	A	E	A	
Approach Vol, veh/h		179			30			1846			469	
Approach Delay, s/veh		50.3			47.7			19.2			1.7	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	86.2		16.5	23.5	70.0		16.5				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	6.0	66.0		19.5	20.0	52.0		19.5				
Max Q Clear Time (g_c+I1), s	2.6	20.2		8.6	16.9	2.0		3.8				
Green Ext Time (p_c), s	0.0	13.9		0.4	0.6	3.5		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	18.5	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Future Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1811	1811	0	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h			0	691	0	0	1381	0	485	485	0
Peak Hour Factor			0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %			0	6	6	0	6	6	6	6	6
Cap, veh/h			0	2468		0	2468		581	581	
Arrive On Green			0.00	0.72	0.00	0.00	1.00	0.00	0.17	0.17	0.00
Sat Flow, veh/h			0	3532	1535	0	3532	1535	3346	3346	1535
Grp Volume(v), veh/h			0	691	0	0	1381	0	485	485	0
Grp Sat Flow(s),veh/h/ln			0	1721	1535	0	1721	1535	1673	1673	1535
Q Serve(g_s), s			0.0	7.8	0.0	0.0	0.0	0.0	15.4	15.4	0.0
Cycle Q Clear(g_c), s			0.0	7.8	0.0	0.0	0.0	0.0	15.4	15.4	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2468		0	2468		581	581	
V/C Ratio(X)			0.00	0.28		0.00	0.56		0.83	0.83	
Avail Cap(c_a), veh/h			0	2468		0	2468		1095	1095	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.98	0.00	0.00	0.83	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	5.5	0.0	0.0	0.0	0.0	43.9	43.9	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0	0.8	0.0	3.2	3.2	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	2.6	0.0	0.0	0.3	0.0	6.6	6.6	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	5.8	0.0	0.0	0.8	0.0	47.2	47.2	0.0
LnGrp LOS				A			A		D	D	
Approach Vol, veh/h				691			1381		485	485	
Approach Delay, s/veh				5.8			0.8		47.2	47.2	
Approach LOS				A			A		D	D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	83.9	26.1	83.9
Change Period (Y+Rc), s	5.0	7.0	5.0
Max Green Setting (Gmax), s	62.0	36.0	62.0
Max Q Clear Time (g_c+I1), s	2.0	17.4	9.8
Green Ext Time (p_c), s	16.4	1.7	5.7

Intersection Summary	
HCM 7th Control Delay, s/veh	10.9
HCM 7th LOS	B

Notes

Unsignalized Delay for [NER, NWR, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Future Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	64	851	245	85	1340	21	298	32	32	21	74	266
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	132	2096	600	108	2870	45	491	189	189	101	326	348
Arrive On Green	0.04	0.54	0.54	0.06	0.57	0.57	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	3374	3849	1102	1739	5056	79	1970	838	838	270	1448	1547
Grp Volume(v), veh/h	64	734	362	85	881	480	298	0	64	95	0	266
Grp Sat Flow(s),veh/h/ln	1687	1662	1628	1739	1662	1812	985	0	1675	1718	0	1547
Q Serve(g_s), s	2.0	14.2	14.3	5.3	17.2	17.2	16.0	0.0	3.4	0.0	0.0	17.7
Cycle Q Clear(g_c), s	2.0	14.2	14.3	5.3	17.2	17.2	20.7	0.0	3.4	4.7	0.0	17.7
Prop In Lane	1.00		0.68	1.00		0.04	1.00		0.50	0.22		1.00
Lane Grp Cap(c), veh/h	132	1810	886	108	1886	1028	491	0	377	427	0	348
V/C Ratio(X)	0.49	0.41	0.41	0.79	0.47	0.47	0.61	0.00	0.17	0.22	0.00	0.76
Avail Cap(c_a), veh/h	199	1810	886	198	1886	1028	871	0	701	751	0	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	14.6	14.7	50.9	14.0	14.0	43.3	0.0	34.3	34.8	0.0	39.9
Incr Delay (d2), s/veh	2.7	0.6	1.3	11.9	0.8	1.5	1.2	0.0	0.2	0.3	0.0	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.4	5.5	2.7	6.4	7.2	4.0	0.0	1.4	2.1	0.0	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.4	15.3	16.0	62.8	14.8	15.5	44.5	0.0	34.5	35.1	0.0	43.4
LnGrp LOS	D	B	B	E	B	B	D		C	D		D
Approach Vol, veh/h		1160			1446			362			361	
Approach Delay, s/veh		17.7			17.9			42.7			41.2	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	67.4		30.8	14.3	64.9		30.8				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	6.5	39.0		46.0	12.5	33.0		46.0				
Max Q Clear Time (g_c+I1), s	4.0	19.2		22.7	7.3	16.3		19.7				
Green Ext Time (p_c), s	0.0	9.6		2.1	0.1	7.0		1.5				

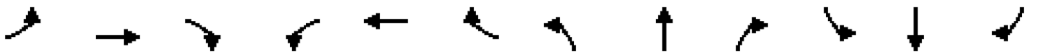
Intersection Summary			
HCM 7th Control Delay, s/veh		23.0	
HCM 7th LOS		C	

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Future Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	0	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	144	598	0	0	1392	62	0	5	0	45	0	26
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	0	6	6	6	6	6	6	6	6
Cap, veh/h	205	2956	0	0	2526	1127	0	74	0	236	0	63
Arrive On Green	0.06	0.86	0.00	0.00	0.73	0.73	0.00	0.04	0.00	0.04	0.00	0.04
Sat Flow, veh/h	3346	3532	0	0	3532	1535	0	1811	0	2733	0	1535
Grp Volume(v), veh/h	144	598	0	0	1392	62	0	5	0	45	0	26
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1535	0	1811	0	1366	0	1535
Q Serve(g_s), s	4.6	3.3	0.0	0.0	19.9	1.2	0.0	0.3	0.0	1.8	0.0	1.8
Cycle Q Clear(g_c), s	4.6	3.3	0.0	0.0	19.9	1.2	0.0	0.3	0.0	2.1	0.0	1.8
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	2956	0	0	2526	1127	0	74	0	236	0	63
V/C Ratio(X)	0.70	0.20	0.00	0.00	0.55	0.06	0.00	0.07	0.00	0.19	0.00	0.41
Avail Cap(c_a), veh/h	365	2956	0	0	2526	1127	0	148	0	347	0	126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.71	0.71	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	1.3	0.0	0.0	6.5	4.1	0.0	50.7	0.0	51.7	0.0	51.5
Incr Delay (d2), s/veh	4.3	0.2	0.0	0.0	0.6	0.1	0.0	0.4	0.0	0.4	0.0	4.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.6	0.0	0.0	6.3	0.4	0.0	0.1	0.0	0.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.0	1.5	0.0	0.0	7.2	4.1	0.0	51.1	0.0	52.1	0.0	55.7
LnGrp LOS	D	A			A	A		D		D		E
Approach Vol, veh/h		742			1454			5			71	
Approach Delay, s/veh		11.9			7.0			51.1			53.4	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.7	85.7		10.5		99.5		10.5				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	12.0	71.0		9.0		90.0		9.0				
Max Q Clear Time (g_c+I1), s	6.6	21.9		2.3		5.3		4.1				
Green Ext Time (p_c), s	0.2	16.4		0.0		4.8		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	10.1	
HCM 7th LOS	B	

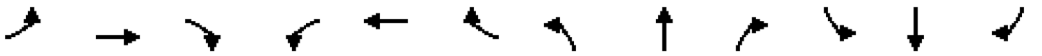
Notes
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Future Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	22	5	11	11	0	11	22	1462	151	54	742	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	80	9	16	131	0	137	38	2339	240	85	2670	40
Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.04	0.02	0.74	0.74	0.05	0.77	0.77
Sat Flow, veh/h	713	235	386	1623	0	1535	1725	3151	323	1725	3471	51
Grp Volume(v), veh/h	38	0	0	11	0	11	22	793	820	54	368	385
Grp Sat Flow(s),veh/h/ln	1334	0	0	1623	0	1535	1725	1721	1753	1725	1721	1802
Q Serve(g_s), s	2.5	0.0	0.0	0.0	0.0	0.7	1.4	24.3	24.9	3.4	6.9	6.9
Cycle Q Clear(g_c), s	3.2	0.0	0.0	0.7	0.0	0.7	1.4	24.3	24.9	3.4	6.9	6.9
Prop In Lane	0.58		0.29	1.00		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	105	0	0	131	0	137	38	1277	1301	85	1324	1386
V/C Ratio(X)	0.36	0.00	0.00	0.08	0.00	0.08	0.57	0.62	0.63	0.63	0.28	0.28
Avail Cap(c_a), veh/h	225	0	0	242	0	264	212	1277	1301	212	1324	1386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.21	0.21	0.21	0.99	0.99	0.99
Uniform Delay (d), s/veh	52.3	0.0	0.0	51.0	0.0	45.9	53.3	6.8	6.9	51.3	3.7	3.7
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.3	0.0	0.2	2.8	0.5	0.5	7.5	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	0.3	0.0	0.3	0.6	7.5	7.9	1.6	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.4	0.0	0.0	51.3	0.0	46.2	56.1	7.3	7.4	58.8	4.2	4.2
LnGrp LOS	D			D		D	E	A	A	E	A	A
Approach Vol, veh/h		38			22			1635			807	
Approach Delay, s/veh		54.4			48.7			8.0			7.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	87.1		10.9	8.9	90.1		10.9				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	13.5	64.5		13.5	13.5	64.5		13.5				
Max Q Clear Time (g_c+I1), s	5.4	26.9		5.2	3.4	8.9		2.7				
Green Ext Time (p_c), s	0.0	17.4		0.1	0.0	5.6		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		9.0	
HCM 7th LOS		A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Future Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h	11	0	11	22	11	98	11	728	0	0	359	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	0	0	4	4
Cap, veh/h	196	29	127	101	41	194	71	1128	0	0	1060	65
Arrive On Green	0.16	0.00	0.16	0.16	0.16	0.16	0.62	0.62	0.00	0.00	0.62	0.62
Sat Flow, veh/h	598	179	776	149	249	1181	8	1825	0	0	1717	105
Grp Volume(v), veh/h	22	0	0	131	0	0	739	0	0	0	0	381
Grp Sat Flow(s),veh/h/ln	1553	0	0	1579	0	0	1834	0	0	0	0	1822
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	0.6	0.0	0.0	4.1	0.0	0.0	14.1	0.0	0.0	0.0	0.0	5.6
Prop In Lane	0.50		0.50	0.17		0.75	0.01		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	353	0	0	336	0	0	1199	0	0	0	0	1125
V/C Ratio(X)	0.06	0.00	0.00	0.39	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	479	0	0	475	0	0	1199	0	0	0	0	1125
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	0.0	20.9	0.0	0.0	6.7	0.0	0.0	0.0	0.0	5.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.7	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.5	0.0	0.0	4.4	0.0	0.0	0.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.6	0.0	0.0	21.7	0.0	0.0	9.1	0.0	0.0	0.0	0.0	5.9
LnGrp LOS	B			C			A					A
Approach Vol, veh/h		22			131			739			381	
Approach Delay, s/veh		19.6			21.7			9.1			5.9	
Approach LOS		B			C			A			A	

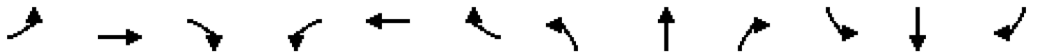
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		15.0		40.0		15.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		14.0		34.0		14.0				
Max Q Clear Time (g_c+I1), s		16.1		2.6		7.6		6.1				
Green Ext Time (p_c), s		5.1		0.0		2.5		0.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	9.6
HCM 7th LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	40	640	320	70	290
Future Volume (veh/h)	230	40	640	320	70	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	250	43	696	348	76	315
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	320	385	846	717	113	1145
Arrive On Green	0.18	0.18	0.46	0.46	0.06	0.62
Sat Flow, veh/h	1753	1560	1841	1560	1753	1841
Grp Volume(v), veh/h	250	43	696	348	76	315
Grp Sat Flow(s),veh/h/ln	1753	1560	1841	1560	1753	1841
Q Serve(g_s), s	7.0	1.1	16.8	7.9	2.2	4.0
Cycle Q Clear(g_c), s	7.0	1.1	16.8	7.9	2.2	4.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	320	385	846	717	113	1145
V/C Ratio(X)	0.78	0.11	0.82	0.49	0.67	0.28
Avail Cap(c_a), veh/h	549	589	1080	916	309	1584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	14.9	12.0	9.6	23.4	4.4
Incr Delay (d2), s/veh	4.2	0.1	4.1	0.5	6.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.4	6.3	2.2	1.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.1	15.0	16.1	10.1	30.1	4.5
LnGrp LOS	C	B	B	B	C	A
Approach Vol, veh/h	293		1044			391
Approach Delay, s/veh	22.8		14.1			9.5
Approach LOS	C		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.3	28.5				36.8	14.3
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	4.2	18.8				6.0	9.0
Green Ext Time (p_c), s	0.1	4.7				2.1	0.5

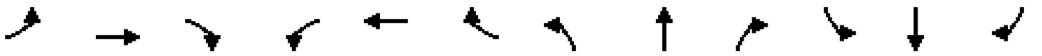
Intersection Summary	
HCM 7th Control Delay, s/veh	14.6
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Future Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	348	33	261				467	652	5	5	261	293
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				4	4	4	4	4	4
Cap, veh/h	506	51	407				495	921	7	87	500	429
Arrive On Green	0.29	0.29	0.29				0.11	0.50	0.50	0.27	0.27	0.27
Sat Flow, veh/h	1753	178	1409				1753	1824	14	9	1818	1560
Grp Volume(v), veh/h	348	0	294				467	0	657	266	0	293
Grp Sat Flow(s),veh/h/ln	1753	0	1587				1753	0	1838	1828	0	1560
Q Serve(g_s), s	7.7	0.0	7.0				5.0	0.0	12.0	0.0	0.0	7.3
Cycle Q Clear(g_c), s	7.7	0.0	7.0				5.0	0.0	12.0	5.3	0.0	7.3
Prop In Lane	1.00		0.89				1.00		0.01	0.02		1.00
Lane Grp Cap(c), veh/h	506	0	458				495	0	928	587	0	429
V/C Ratio(X)	0.69	0.00	0.64				0.94	0.00	0.71	0.45	0.00	0.68
Avail Cap(c_a), veh/h	1127	0	1021				495	0	1816	1453	0	1182
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	13.5				13.8	0.0	8.3	13.4	0.0	14.1
Incr Delay (d2), s/veh	1.7	0.0	1.5				26.9	0.0	1.0	0.5	0.0	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	2.2				5.6	0.0	3.4	1.9	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.4	0.0	15.0				40.7	0.0	9.3	13.9	0.0	16.0
LnGrp LOS	B		B				D		A	B		B
Approach Vol, veh/h		642						1124			559	
Approach Delay, s/veh		15.2						22.4			15.0	
Approach LOS		B						C			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		27.0		16.6	10.0	17.0						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		43.0		28.0	5.0	33.0						
Max Q Clear Time (g_c+I1), s		14.0		9.7	7.0	9.3						
Green Ext Time (p_c), s		5.1		2.9	0.0	2.7						

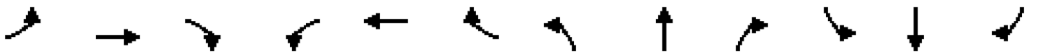
Intersection Summary												
HCM 7th Control Delay, s/veh			18.6									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Future Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	5	196	250	130	424	54	446	467	217	76	304	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	52	321	276	164	542	69	505	752	637	99	576	9
Arrive On Green	0.18	0.18	0.18	0.09	0.34	0.34	0.29	0.41	0.41	0.06	0.16	0.16
Sat Flow, veh/h	14	1827	1572	1767	1613	205	1767	1856	1572	1767	3550	58
Grp Volume(v), veh/h	201	0	250	130	0	478	446	467	217	76	151	158
Grp Sat Flow(s),veh/h/ln	1841	0	1572	1767	0	1819	1767	1856	1572	1767	1763	1845
Q Serve(g_s), s	0.0	0.0	11.5	5.3	0.0	17.5	17.9	14.8	7.0	3.1	5.8	5.8
Cycle Q Clear(g_c), s	7.4	0.0	11.5	5.3	0.0	17.5	17.9	14.8	7.0	3.1	5.8	5.8
Prop In Lane	0.02		1.00	1.00		0.11	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	373	0	276	164	0	611	505	752	637	99	286	300
V/C Ratio(X)	0.54	0.00	0.91	0.79	0.00	0.78	0.88	0.62	0.34	0.77	0.53	0.53
Avail Cap(c_a), veh/h	373	0	276	215	0	663	836	752	637	430	286	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	29.9	32.9	0.0	22.1	25.3	17.5	15.2	34.5	28.4	28.4
Incr Delay (d2), s/veh	1.5	0.0	30.8	13.9	0.0	5.6	6.5	3.8	1.5	11.6	6.8	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	6.5	2.8	0.0	7.9	7.9	6.6	2.6	1.6	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.8	0.0	60.7	46.8	0.0	27.8	31.8	21.3	16.6	46.0	35.2	34.9
LnGrp LOS	C		E	D		C	C	C	B	D	D	C
Approach Vol, veh/h		451			608			1130			385	
Approach Delay, s/veh		46.9			31.8			24.6			37.2	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	35.0	11.9	18.0	27.1	17.0		29.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	30.0	9.0	13.0	35.0	12.0		27.0				
Max Q Clear Time (g_c+I1), s	5.1	16.8	7.3	13.5	19.9	7.8		19.5				
Green Ext Time (p_c), s	0.1	3.1	0.0	0.0	1.3	0.6		1.8				

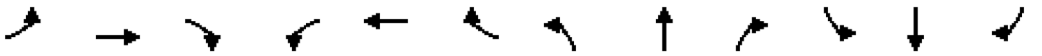
Intersection Summary												
HCM 7th Control Delay, s/veh			32.1									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Future Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	22	0	11	0	0	0	43	1109	0	0	652	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	0	47	0	56	0	65	1385	0	0	1010	84
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.04	0.75	0.00	0.00	0.60	0.60
Sat Flow, veh/h	1406	0	1572	0	1856	0	1767	1856	0	0	1690	140
Grp Volume(v), veh/h	22	0	11	0	0	0	43	1109	0	0	0	706
Grp Sat Flow(s),veh/h/ln	1406	0	1572	0	1856	0	1767	1856	0	0	0	1830
Q Serve(g_s), s	0.7	0.0	0.3	0.0	0.0	0.0	1.1	16.9	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	0.7	0.0	0.3	0.0	0.0	0.0	1.1	16.9	0.0	0.0	0.0	11.3
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h	203	0	47	0	56	0	65	1385	0	0	0	1093
V/C Ratio(X)	0.11	0.00	0.23	0.00	0.00	0.00	0.66	0.80	0.00	0.00	0.00	0.65
Avail Cap(c_a), veh/h	476	0	352	0	415	0	395	2905	0	0	0	2252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	21.2	0.0	0.0	0.0	21.2	3.6	0.0	0.0	0.0	5.9
Incr Delay (d2), s/veh	0.2	0.0	2.5	0.0	0.0	0.0	10.7	1.1	0.0	0.0	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	0.6	1.2	0.0	0.0	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.6	0.0	23.7	0.0	0.0	0.0	31.9	4.7	0.0	0.0	0.0	6.5
LnGrp LOS	C		C				C	A				A
Approach Vol, veh/h		33			0			1152			706	
Approach Delay, s/veh		22.3			0.0			5.7			6.5	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		38.4		6.3	6.7	31.7		6.3				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		70.0		10.0	10.0	55.0		10.0				
Max Q Clear Time (g_c+I1), s		18.9		2.7	3.1	13.3		0.0				
Green Ext Time (p_c), s		14.5		0.0	0.0	6.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	6.3
HCM 7th LOS	A



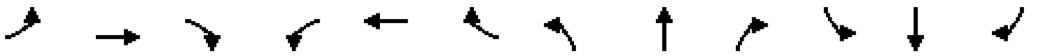
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Future Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	237	0	93	0	0	1	124	639	0	0	392	227
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	0	316	0	0	316	157	704	0	0	674	390
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.20	0.61	0.61	0.00	0.00	0.61	0.61
Sat Flow, veh/h	1405	0	1572	0	0	1572	161	1151	0	0	1102	638
Grp Volume(v), veh/h	237	0	93	0	0	1	763	0	0	0	0	619
Grp Sat Flow(s),veh/h/ln	1405	0	1572	0	0	1573	1312	0	0	0	0	1741
Q Serve(g_s), s	11.7	0.0	3.6	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0	15.4
Cycle Q Clear(g_c), s	11.7	0.0	3.6	0.0	0.0	0.0	40.2	0.0	0.0	0.0	0.0	15.4
Prop In Lane	1.00		1.00	0.00		1.00	0.16		0.00	0.00		0.37
Lane Grp Cap(c), veh/h	381	0	316	0	0	316	861	0	0	0	0	1064
V/C Ratio(X)	0.62	0.00	0.29	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.58
Avail Cap(c_a), veh/h	510	0	459	0	0	492	894	0	0	0	0	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	24.4	0.0	0.0	23.0	14.4	0.0	0.0	0.0	0.0	8.4
Incr Delay (d2), s/veh	1.7	0.0	0.5	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	1.3	0.0	0.0	0.0	12.6	0.0	0.0	0.0	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.3	0.0	24.9	0.0	0.0	23.0	24.8	0.0	0.0	0.0	0.0	9.2
LnGrp LOS	C		C			C	C					A
Approach Vol, veh/h		330			1			763			619	
Approach Delay, s/veh		28.1			23.0			24.8			9.2	
Approach LOS		C			C			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.5		20.4		51.5		20.4				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		45.5		21.0		45.5		* 23				
Max Q Clear Time (g_c+I1), s		42.2		13.7		17.4		2.0				
Green Ext Time (p_c), s		1.7		0.7		4.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	19.8
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Future Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	5	0	5	0	0	0	11	705	0	0	337	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	140	0	10	0	24	0	94	1319	0	0	1329	0
Arrive On Green	0.01	0.00	0.01	0.00	0.00	0.00	0.72	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	736	0	736	0	1841	0	8	1827	0	0	1841	0
Grp Volume(v), veh/h	10	0	0	0	0	0	716	0	0	0	337	0
Grp Sat Flow(s),veh/h/ln	1473	0	0	0	1841	0	1835	0	0	0	1841	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	2.6	0.0
Prop In Lane	0.50		0.50	0.00		0.00	0.02		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	149	0	0	0	24	0	1413	0	0	0	1329	0
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.25	0.00
Avail Cap(c_a), veh/h	520	0	0	0	532	0	1413	0	0	0	1329	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	20.4	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.6	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.1	0.0
LnGrp LOS	C						A				A	
Approach Vol, veh/h		10			0			716			337	
Approach Delay, s/veh		20.6			0.0			2.9			2.1	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.5		36.0		5.5				
Change Period (Y+Rc), s		6.0		5.0		6.0		* 5				
Max Green Setting (Gmax), s		30.0		11.0		30.0		* 12				
Max Q Clear Time (g_c+I1), s		9.3		2.3		4.6		0.0				
Green Ext Time (p_c), s		5.2		0.0		2.1		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	2.8
HCM 7th LOS	A

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	320	50	170	740	40	130
Future Vol, veh/h	320	50	170	740	40	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	337	53	179	779	42	137

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	389	0	1500	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	1137	-
Critical Hdwy	-	-	4.15	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3	3
Pot Cap-1 Maneuver	-	-	1153	-	173	759
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	332	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1153	-	125	759
Mov Cap-2 Maneuver	-	-	-	-	125	-
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	241	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	1.62	25.95
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	347	336	-	-	-
HCM Lane V/C Ratio	0.516	0.155	-	-	-
HCM Control Delay (s/veh)	25.9	8.7	0	-	-
HCM Lane LOS	D	A	A	-	-
HCM 95th %tile Q(veh)	2.8	0.5	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	30	120	100	350	760	30
Future Vol, veh/h	30	120	100	350	760	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	33	130	109	380	826	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1440	842	859	0	-	0
Stage 1	842	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6	6	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	2.236	-	-	-
Pot Cap-1 Maneuver	187	410	774	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	154	410	774	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	384	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s/v	29.19	2.31	0
HCM LOS	D		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	307	400	-
HCM Lane V/C Ratio	-	-	0.53	0.14	-
HCM Control Delay (s/veh)	-	-	29.2	10.4	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	2.9	0.5	-

Intersection	
Int Delay, s/veh	24.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	150	910	150	80	520
Future Vol, veh/h	80	150	910	150	80	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	83	156	948	156	83	542

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1734	1026	0	0	1104	0
Stage 1	1026	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.236	-
Pot Cap-1 Maneuver	126	323	-	-	625	-
Stage 1	379	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	109	323	-	-	625	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	195.9	0	1.55
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	192	625	-
HCM Lane V/C Ratio	-	-	1.247	0.133	-
HCM Control Delay (s/veh)	-	-	195.9	11.6	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	12.9	0.5	-

Intersection	
Int Delay, s/veh	4.2

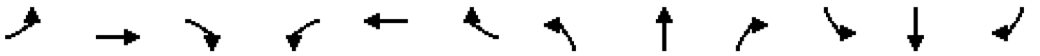
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Future Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	11	0	5	11	5	106	11	979	11	53	553	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1673	1681	564	1665	1686	984	574	0	0	989	0	0
Stage 1	670	670	-	1005	1005	-	-	-	-	-	-	-
Stage 2	1003	1011	-	660	681	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.54	6.24	7.14	6.54	6.24	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.536	4.036	3.336	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	75	94	521	76	93	299	989	-	-	691	-	-
Stage 1	443	452	-	288	317	-	-	-	-	-	-	-
Stage 2	289	315	-	449	447	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	81	521	65	80	299	989	-	-	691	-	-
Mov Cap-2 Maneuver	39	81	-	65	80	-	-	-	-	-	-	-
Stage 1	393	401	-	282	309	-	-	-	-	-	-	-
Stage 2	179	307	-	394	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	91.06	44.01	0.09	0.9
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	19	-	-	57	209	151	-	-
HCM Lane V/C Ratio	0.011	-	-	0.28	0.585	0.077	-	-
HCM Control Delay (s/veh)	8.7	0	-	91.1	44	10.6	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1	3.3	0.2	-	-

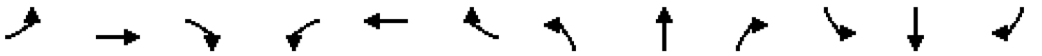
Part 2: Existing Conditions: Weekday PM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Future Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	10	292	302	21	83	240	448	83	42	1094	115
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	448	58	707	374	124	489	245	1329	245	56	1298	136
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.07	0.44	0.44	0.03	0.40	0.40
Sat Flow, veh/h	1045	155	1585	1077	330	1305	3456	2996	552	1781	3245	341
Grp Volume(v), veh/h	83	0	292	302	0	104	240	264	267	42	598	611
Grp Sat Flow(s),veh/h/ln	1200	0	1585	1077	0	1635	1728	1777	1771	1781	1777	1809
Q Serve(g_s), s	4.9	0.0	15.0	33.1	0.0	5.1	8.3	11.7	11.8	2.8	36.6	36.7
Cycle Q Clear(g_c), s	10.0	0.0	15.0	43.1	0.0	5.1	8.3	11.7	11.8	2.8	36.6	36.7
Prop In Lane	0.88		1.00	1.00		0.80	1.00		0.31	1.00		0.19
Lane Grp Cap(c), veh/h	506	0	707	374	0	613	245	788	786	56	711	724
V/C Ratio(X)	0.16	0.00	0.41	0.81	0.00	0.17	0.98	0.34	0.34	0.75	0.84	0.84
Avail Cap(c_a), veh/h	506	0	707	374	0	613	245	788	786	104	711	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	22.6	41.8	0.0	25.0	55.7	21.8	21.9	57.7	32.6	32.6
Incr Delay (d2), s/veh	0.2	0.0	0.4	12.2	0.0	0.1	51.3	1.1	1.1	18.1	11.6	11.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	5.6	10.0	0.0	2.0	5.4	5.1	5.2	1.5	17.7	18.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.1	0.0	23.0	54.0	0.0	25.2	107.0	22.9	23.0	75.7	44.2	44.1
LnGrp LOS	C		C	D		C	F	C	C	E	D	D
Approach Vol, veh/h		375			406			771			1251	
Approach Delay, s/veh		24.1			46.6			49.1			45.2	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	58.2		51.0	16.0	53.0		51.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	7.0	50.0		45.0	8.5	48.0		45.0				
Max Q Clear Time (g_c+I1), s	4.8	13.8		17.0	10.3	38.7		45.1				
Green Ext Time (p_c), s	0.0	3.6		1.5	0.0	5.3		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		43.7	
HCM 7th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Future Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	0	0	21	5	5	443	670	21	10	1268	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	0		88	15	10	518	2791	87	21	2329	
Arrive On Green	0.04	0.00	0.00	0.04	0.04	0.04	0.15	0.79	0.79	0.02	1.00	0.00
Sat Flow, veh/h	2810	0	1585	923	361	247	3456	3517	110	1781	3554	1585
Grp Volume(v), veh/h	79	0	0	31	0	0	443	338	353	10	1268	0
Grp Sat Flow(s),veh/h/ln	1405	0	1585	1531	0	0	1728	1777	1851	1781	1777	1585
Q Serve(g_s), s	0.4	0.0	0.0	1.9	0.0	0.0	15.0	5.8	5.8	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	2.3	0.0	0.0	15.0	5.8	5.8	0.7	0.0	0.0
Prop In Lane	1.00		1.00	0.68		0.16	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	249	0		112	0	0	518	1410	1468	21	2329	
V/C Ratio(X)	0.32	0.00		0.28	0.00	0.00	0.86	0.24	0.24	0.48	0.54	
Avail Cap(c_a), veh/h	544	0		271	0	0	691	1410	1468	134	2329	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.94	0.94	0.94	0.59	0.59	0.00
Uniform Delay (d), s/veh	56.5	0.0	0.0	56.3	0.0	0.0	49.7	3.2	3.2	58.2	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.3	0.0	0.0	7.6	0.4	0.4	9.5	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.0	0.0	0.0	7.0	1.8	1.9	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.2	0.0	0.0	57.6	0.0	0.0	57.3	3.5	3.5	67.7	0.5	0.0
LnGrp LOS	E			E			E	A	A	E	A	
Approach Vol, veh/h		79			31			1134			1278	
Approach Delay, s/veh		57.2			57.6			24.5			1.1	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	100.2		12.4	24.0	83.6		12.4				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	9.0	75.0		17.5	24.0	60.0		17.5				
Max Q Clear Time (g_c+I1), s	2.7	7.8		4.7	17.0	2.0		4.3				
Green Ext Time (p_c), s	0.0	5.0		0.1	1.0	13.9		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.1	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Future Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1475	0	0	929	657	182	182	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2967		0	2967	1323	250	250	
Arrive On Green			0.00	0.83	0.00	0.00	1.00	1.00	0.07	0.07	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1475	0	0	929	657	182	182	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	14.4	0.0	0.0	0.0	0.0	6.1	6.1	0.0
Cycle Q Clear(g_c), s			0.0	14.4	0.0	0.0	0.0	0.0	6.1	6.1	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2967		0	2967	1323	250	250	
V/C Ratio(X)			0.00	0.50		0.00	0.31	0.50	0.73	0.73	
Avail Cap(c_a), veh/h			0	2967		0	2967	1323	668	668	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.84	0.00	0.00	0.85	0.85	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	3.0	0.0	0.0	0.0	0.0	54.6	54.6	0.0
Incr Delay (d2), s/veh			0.0	0.5	0.0	0.0	0.2	1.1	4.0	4.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	3.8	0.0	0.0	0.1	0.4	2.8	2.8	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.5	0.0	0.0	0.2	1.1	58.6	58.6	0.0
LnGrp LOS				A			A	A	E	E	
Approach Vol, veh/h				1475			1586		182	182	
Approach Delay, s/veh				3.5			0.6		58.6	58.6	
Approach LOS				A			A		E	E	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	104.4		15.6		104.4						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	85.0		23.0		85.0						
Max Q Clear Time (g_c+I1), s	2.0		8.1		16.4						
Green Ext Time (p_c), s	14.0		0.5		18.8						

Intersection Summary	
HCM 7th Control Delay, s/veh	5.2
HCM 7th LOS	A

Notes

Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Future Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	1361	351	113	918	62	278	93	93	41	103	351
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	454	1926	495	138	2062	139	450	251	251	133	316	463
Arrive On Green	0.13	0.48	0.48	0.08	0.42	0.42	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	3456	4046	1041	1781	4886	329	1818	858	858	324	1080	1585
Grp Volume(v), veh/h	381	1144	568	113	639	341	278	0	186	144	0	351
Grp Sat Flow(s),veh/h/ln	1728	1702	1683	1781	1702	1811	909	0	1716	1404	0	1585
Q Serve(g_s), s	12.9	31.9	32.0	7.5	16.0	16.1	17.7	0.0	10.3	3.0	0.0	24.2
Cycle Q Clear(g_c), s	12.9	31.9	32.0	7.5	16.0	16.1	31.0	0.0	10.3	13.3	0.0	24.2
Prop In Lane	1.00		0.62	1.00		0.18	1.00		0.50	0.28		1.00
Lane Grp Cap(c), veh/h	454	1620	801	138	1437	764	450	0	502	449	0	463
V/C Ratio(X)	0.84	0.71	0.71	0.82	0.44	0.45	0.62	0.00	0.37	0.32	0.00	0.76
Avail Cap(c_a), veh/h	648	1620	801	156	1437	764	585	0	629	569	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	24.8	24.9	54.5	24.7	24.7	47.4	0.0	33.7	33.9	0.0	38.6
Incr Delay (d2), s/veh	5.8	2.3	4.5	25.5	1.0	1.9	1.4	0.0	0.5	0.4	0.0	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	13.1	13.5	4.3	6.6	7.3	4.1	0.0	4.4	3.5	0.0	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.7	27.1	29.4	80.0	25.7	26.6	48.8	0.0	34.2	34.3	0.0	43.0
LnGrp LOS	E	C	C	E	C	C	D		C	C		D
Approach Vol, veh/h		2093			1093			464			495	
Approach Delay, s/veh		33.1			31.6			42.9			40.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.3	55.6		41.1	16.8	62.1		41.1				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	22.5	35.0		44.0	10.5	47.0		44.0				
Max Q Clear Time (g_c+I1), s	14.9	18.1		33.0	9.5	34.0		26.2				
Green Ext Time (p_c), s	0.9	6.1		2.2	0.0	9.2		2.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			34.7									
HCM 7th LOS			C									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Future Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	368	1179	0	0	821	147	0	0	0	112	0	365
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	442	2726	0	0	2064	921	0	264	0	312	0	448
Arrive On Green	0.13	0.77	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.14	0.00	0.14
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	368	1179	0	0	821	147	0	0	0	112	0	365
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	12.5	13.9	0.0	0.0	15.1	5.1	0.0	0.0	0.0	6.9	0.0	13.4
Cycle Q Clear(g_c), s	12.5	13.9	0.0	0.0	15.1	5.1	0.0	0.0	0.0	6.9	0.0	13.4
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	2726	0	0	2064	921	0	264	0	312	0	448
V/C Ratio(X)	0.83	0.43	0.00	0.00	0.40	0.16	0.00	0.00	0.00	0.36	0.00	0.82
Avail Cap(c_a), veh/h	662	2726	0	0	2064	921	0	452	0	490	0	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.89	0.89	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	4.9	0.0	0.0	13.7	11.6	0.0	0.0	0.0	47.2	0.0	50.0
Incr Delay (d2), s/veh	5.7	0.5	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.7	0.0	3.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	4.5	0.0	0.0	6.1	1.9	0.0	0.0	0.0	3.1	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.8	5.4	0.0	0.0	14.2	11.9	0.0	0.0	0.0	47.9	0.0	53.7
LnGrp LOS	E	A			B	B				D		D
Approach Vol, veh/h		1547			968			0			477	
Approach Delay, s/veh		17.6			13.9			0.0			52.3	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	22.4	74.7		22.9		97.1		22.9				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	23.0	50.0		29.0		80.0		29.0				
Max Q Clear Time (g_c+I1), s	14.5	17.1		0.0		15.9		15.4				
Green Ext Time (p_c), s	0.9	7.4		0.0		12.5		1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			21.9									
HCM 7th LOS			C									

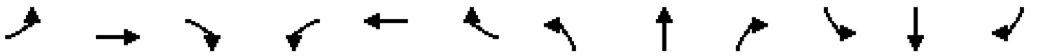
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Future Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1	21	147	1	95	21	874	137	11	1368	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	13	30	252	1	331	37	1939	304	74	2309	54
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	0.64	0.64	0.04	0.66	0.66
Sat Flow, veh/h	204	78	180	1135	8	1572	1767	3054	479	1767	3521	82
Grp Volume(v), veh/h	54	0	0	148	0	95	21	505	506	11	684	716
Grp Sat Flow(s),veh/h/ln	463	0	0	1143	0	1572	1767	1763	1769	1767	1763	1841
Q Serve(g_s), s	2.9	0.0	0.0	0.0	0.0	6.1	1.4	17.6	17.6	0.7	26.2	26.3
Cycle Q Clear(g_c), s	18.1	0.0	0.0	15.3	0.0	6.1	1.4	17.6	17.6	0.7	26.2	26.3
Prop In Lane	0.59		0.39	0.99		1.00	1.00		0.27	1.00		0.04
Lane Grp Cap(c), veh/h	126	0	0	253	0	331	37	1120	1124	74	1156	1207
V/C Ratio(X)	0.43	0.00	0.00	0.58	0.00	0.29	0.57	0.45	0.45	0.15	0.59	0.59
Avail Cap(c_a), veh/h	303	0	0	428	0	531	96	1120	1124	96	1156	1207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.09	0.09	0.86	0.86	0.86
Uniform Delay (d), s/veh	50.6	0.0	0.0	47.8	0.0	39.8	58.2	11.2	11.2	55.4	11.6	11.6
Incr Delay (d2), s/veh	2.3	0.0	0.0	2.1	0.0	0.5	1.2	0.1	0.1	0.8	1.9	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	4.4	0.0	2.4	0.6	6.6	6.6	0.3	10.2	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.9	0.0	0.0	49.9	0.0	40.3	59.4	11.3	11.3	56.2	13.5	13.5
LnGrp LOS	D			D		D	E	B	B	E	B	B
Approach Vol, veh/h		54			243			1032			1411	
Approach Delay, s/veh		52.9			46.1			12.3			13.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	81.7		26.8	9.0	84.2		26.8				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	6.5	59.5		35.5	6.5	59.5		35.5				
Max Q Clear Time (g_c+I1), s	2.7	19.6		20.1	3.4	28.3		17.3				
Green Ext Time (p_c), s	0.0	8.3		0.2	0.0	12.6		1.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		16.9	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	10	0	10	21	10	52	10	500	0	0	729	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	242	12	78	183	21	95	126	1064	0	0	996	71
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.58	0.58	0.00	0.00	0.58	0.58
Sat Flow, veh/h	688	126	815	375	217	993	10	1843	0	0	1725	123
Grp Volume(v), veh/h	20	0	0	83	0	0	510	0	0	0	0	781
Grp Sat Flow(s),veh/h/ln	1629	0	0	1585	0	0	1853	0	0	0	0	1848
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.5	0.0	0.0	4.8	0.0	0.0	0.0	0.0	9.5
Prop In Lane	0.50		0.50	0.25		0.63	0.02		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	332	0	0	299	0	0	1190	0	0	0	0	1067
V/C Ratio(X)	0.06	0.00	0.00	0.28	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.73
Avail Cap(c_a), veh/h	907	0	0	917	0	0	2218	0	0	0	0	2117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	13.2	0.0	0.0	3.8	0.0	0.0	0.0	0.0	4.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	13.7	0.0	0.0	4.0	0.0	0.0	0.0	0.0	5.7
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		20			83			510			781	
Approach Delay, s/veh		12.7			13.7			4.0			5.7	
Approach LOS		B			B			A			A	

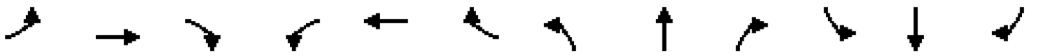
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.6		7.9		22.6		7.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		15.0		35.0		15.0				
Max Q Clear Time (g_c+I1), s		6.8		2.3		11.5		3.5				
Green Ext Time (p_c), s		3.6		0.0		6.2		0.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			5.7									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	120	370	310	170	560
Future Volume (veh/h)	290	120	370	310	170	560
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	125	385	323	177	583
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	391	348	611	866	227	1053
Arrive On Green	0.22	0.22	0.33	0.33	0.13	0.56
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	302	125	385	323	177	583
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	7.3	3.1	8.0	5.3	4.4	9.1
Cycle Q Clear(g_c), s	7.3	3.1	8.0	5.3	4.4	9.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	391	348	611	866	227	1053
V/C Ratio(X)	0.77	0.36	0.63	0.37	0.78	0.55
Avail Cap(c_a), veh/h	620	552	1221	1383	349	1791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	15.2	13.1	5.9	19.4	6.4
Incr Delay (d2), s/veh	3.3	0.6	1.1	0.3	6.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.0	3.0	2.4	2.0	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	20.1	15.8	14.2	6.2	25.4	6.8
LnGrp LOS	C	B	B	A	C	A
Approach Vol, veh/h	427		708			760
Approach Delay, s/veh	18.9		10.6			11.2
Approach LOS	B		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.9	20.0				30.9	15.1
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	6.4	10.0				11.1	9.3
Green Ext Time (p_c), s	0.1	3.5				4.4	0.8

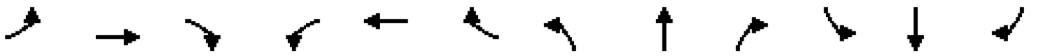
Intersection Summary		
HCM 7th Control Delay, s/veh		12.7
HCM 7th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Future Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	124	258				309	392	10	21	454	330
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	427	141	293				474	1139	29	63	814	717
Arrive On Green	0.26	0.26	0.26				0.11	0.63	0.63	0.45	0.45	0.45
Sat Flow, veh/h	1639	541	1126				1781	1816	46	36	1801	1585
Grp Volume(v), veh/h	340	0	382				309	0	402	475	0	330
Grp Sat Flow(s),veh/h/ln	1639	0	1668				1781	0	1862	1838	0	1585
Q Serve(g_s), s	15.5	0.0	17.6				6.9	0.0	8.2	0.0	0.0	11.5
Cycle Q Clear(g_c), s	15.5	0.0	17.6				6.9	0.0	8.2	14.9	0.0	11.5
Prop In Lane	1.00		0.68				1.00		0.02	0.04		1.00
Lane Grp Cap(c), veh/h	427	0	434				474	0	1168	878	0	717
V/C Ratio(X)	0.80	0.00	0.88				0.65	0.00	0.34	0.54	0.00	0.46
Avail Cap(c_a), veh/h	471	0	479				496	0	1168	878	0	717
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	0.75	0.00	0.75
Uniform Delay (d), s/veh	27.6	0.0	28.4				11.4	0.0	7.1	16.1	0.0	15.2
Incr Delay (d2), s/veh	8.5	0.0	16.0				2.9	0.0	0.8	1.8	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	8.6				2.7	0.0	3.0	6.4	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.1	0.0	44.3				14.3	0.0	7.9	17.9	0.0	16.8
LnGrp LOS	D		D				B		A	B		B
Approach Vol, veh/h		722						711			805	
Approach Delay, s/veh		40.5						10.7			17.4	
Approach LOS		D						B			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		55.2		24.8	14.0	41.2						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		48.0		23.0	10.0	33.0						
Max Q Clear Time (g_c+I1), s		10.2		19.6	8.9	16.9						
Green Ext Time (p_c), s		2.8		1.2	0.1	4.0						

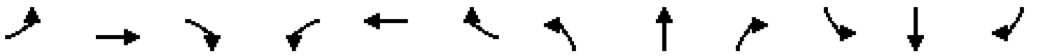
Intersection Summary												
HCM 7th Control Delay, s/veh			22.7									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Future Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	309	371	216	371	52	278	340	186	206	412	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	535	453	379	723	101	320	381	323	251	536	13
Arrive On Green	0.00	0.29	0.29	0.10	0.45	0.45	0.18	0.20	0.20	0.14	0.15	0.15
Sat Flow, veh/h	0	1870	1585	1781	1605	225	1781	1870	1585	1781	3546	86
Grp Volume(v), veh/h	0	309	371	216	0	423	278	340	186	206	206	216
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1781	0	1830	1781	1870	1585	1781	1777	1855
Q Serve(g_s), s	0.0	10.3	15.9	6.0	0.0	12.1	11.1	12.9	7.7	8.2	8.1	8.2
Cycle Q Clear(g_c), s	0.0	10.3	15.9	6.0	0.0	12.1	11.1	12.9	7.7	8.2	8.1	8.2
Prop In Lane	0.00		1.00	1.00		0.12	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	0	535	453	379	0	824	320	381	323	251	269	280
V/C Ratio(X)	0.00	0.58	0.82	0.57	0.00	0.51	0.87	0.89	0.58	0.82	0.77	0.77
Avail Cap(c_a), veh/h	0	870	738	379	0	1152	341	381	323	366	340	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.3	24.3	16.0	0.0	14.4	29.1	28.3	26.2	30.5	29.8	29.8
Incr Delay (d2), s/veh	0.0	1.0	3.8	2.0	0.0	0.5	19.8	22.4	2.5	9.3	7.9	7.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	6.1	2.4	0.0	4.7	6.3	7.9	3.0	4.0	3.9	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	23.3	28.1	18.0	0.0	14.9	48.9	50.7	28.8	39.8	37.6	37.5
LnGrp LOS		C	C	B		B	D	D	C	D	D	D
Approach Vol, veh/h		680			639			804			628	
Approach Delay, s/veh		25.9			15.9			45.0			38.3	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	19.9	12.0	25.9	19.1	16.0		37.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	14.0	7.0	34.0	14.0	14.0		46.0				
Max Q Clear Time (g_c+I1), s	10.2	14.9	8.0	17.9	13.1	10.2		14.1				
Green Ext Time (p_c), s	0.2	0.0	0.0	3.0	0.1	0.9		2.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	32.0
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Future Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	0	41	0	0	0	41	742	0	0	918	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	0	181	0	151	0	59	1403	0	0	1096	74
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.03	0.75	0.00	0.00	0.63	0.63
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1732	117
Grp Volume(v), veh/h	82	0	41	0	0	0	41	742	0	0	0	980
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	3.3	0.0	1.4	0.0	0.0	0.0	1.3	9.7	0.0	0.0	0.0	24.5
Cycle Q Clear(g_c), s	3.3	0.0	1.4	0.0	0.0	0.0	1.3	9.7	0.0	0.0	0.0	24.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	236	0	181	0	151	0	59	1403	0	0	0	1170
V/C Ratio(X)	0.35	0.00	0.23	0.00	0.00	0.00	0.69	0.53	0.00	0.00	0.00	0.84
Avail Cap(c_a), veh/h	361	0	320	0	316	0	211	2687	0	0	0	2282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	23.8	0.0	0.0	0.0	28.3	3.1	0.0	0.0	0.0	8.5
Incr Delay (d2), s/veh	0.9	0.0	0.6	0.0	0.0	0.0	13.6	0.3	0.0	0.0	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.5	0.0	0.0	0.0	0.8	1.6	0.0	0.0	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.4	0.0	24.5	0.0	0.0	0.0	41.9	3.4	0.0	0.0	0.0	10.2
LnGrp LOS	C		C				D	A				B
Approach Vol, veh/h		123			0			783			980	
Approach Delay, s/veh		26.4			0.0			5.4			10.2	
Approach LOS		C						A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		49.4		9.8	7.0	42.4		9.8				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		85.0		10.0	7.0	73.0		10.0				
Max Q Clear Time (g_c+I1), s		11.7		5.3	3.3	26.5		0.0				
Green Ext Time (p_c), s		6.6		0.2	0.0	10.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	9.2
HCM 7th LOS	A

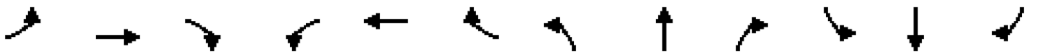
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Future Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	266	1	96	0	0	0	64	436	1	0	713	287
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	3	280	0	333	0	90	578	1	0	836	336
Arrive On Green	0.18	0.18	0.18	0.00	0.00	0.00	0.66	0.66	0.66	0.00	0.66	0.66
Sat Flow, veh/h	1781	16	1571	0	1870	0	62	877	2	0	1268	510
Grp Volume(v), veh/h	266	0	97	0	0	0	501	0	0	0	0	1000
Grp Sat Flow(s),veh/h/ln	1781	0	1588	0	1870	0	940	0	0	0	0	1778
Q Serve(g_s), s	11.9	0.0	4.4	0.0	0.0	0.0	12.2	0.0	0.0	0.0	0.0	36.3
Cycle Q Clear(g_c), s	11.9	0.0	4.4	0.0	0.0	0.0	48.5	0.0	0.0	0.0	0.0	36.3
Prop In Lane	1.00		0.99	0.00		0.00	0.13		0.00	0.00		0.29
Lane Grp Cap(c), veh/h	404	0	283	0	333	0	668	0	0	0	0	1172
V/C Ratio(X)	0.66	0.00	0.34	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.85
Avail Cap(c_a), veh/h	539	0	403	0	486	0	1034	0	0	0	0	1622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	29.8	0.0	0.0	0.0	11.4	0.0	0.0	0.0	0.0	11.0
Incr Delay (d2), s/veh	1.8	0.0	0.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	3.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	1.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	0.0	30.5	0.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	14.4
LnGrp LOS	C		C				B					B
Approach Vol, veh/h		363			0			501			1000	
Approach Delay, s/veh		33.6			0.0			13.2			14.4	
Approach LOS		C						B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.0		20.7		62.0		20.7				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		75.5		21.0		75.5		* 22				
Max Q Clear Time (g_c+I1), s		50.5		13.9		38.3		0.0				
Green Ext Time (p_c), s		4.1		0.8		11.2		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.8
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Future Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	5	0	5	1	0	0	5	490	0	0	708	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	149	0	17	210	0	0	91	1342	0	0	1349	0
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	740	0	740	1493	0	0	4	1832	0	0	1841	0
Grp Volume(v), veh/h	10	0	0	1	0	0	495	0	0	0	708	0
Grp Sat Flow(s),veh/h/ln	1481	0	0	1493	0	0	1835	0	0	0	1841	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	6.8	0.0
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	166	0	0	210	0	0	1434	0	0	0	1349	0
V/C Ratio(X)	0.06	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.52	0.00
Avail Cap(c_a), veh/h	564	0	0	585	0	0	1434	0	0	0	1349	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	19.7	0.0	0.0	19.6	0.0	0.0	2.0	0.0	0.0	0.0	2.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.6	0.0	0.0	2.1	0.0	0.0	0.0	2.8	0.0
LnGrp LOS	B			B			A				A	
Approach Vol, veh/h		10			1			495			708	
Approach Delay, s/veh		19.8			19.6			2.1			2.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		4.9		36.0		4.9				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		6.0		2.3		8.8		2.0				
Green Ext Time (p_c), s		3.3		0.0		5.1		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			2.7									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	800	20	55	620	10	40
Future Vol, veh/h	800	20	55	620	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	860	22	59	667	11	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	882	0	1656	871
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	785	-
Critical Hdwy	-	-	4.12	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	767	-	140	395
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	767	-	123	395
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	440	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.82	21.33
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	274	147	-	-	-
HCM Lane V/C Ratio	0.196	0.077	-	-	-
HCM Control Delay (s/veh)	21.3	10.1	0	-	-
HCM Lane LOS	C	B	A	-	-
HCM 95th %tile Q(veh)	0.7	0.2	-	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	100	740	550	20	30	100
Future Vol, veh/h	100	740	550	20	30	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	787	585	21	32	106

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	606	0	-	0	1596	596
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	1000	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	972	-	-	-	152	564
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	392	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	972	-	-	-	122	564
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	392	-

Approach	SE	NW	SW
HCM Control Delay, s/v	1.09	0	25.92
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	214	-	308
HCM Lane V/C Ratio	-	-	0.109	-	0.45
HCM Control Delay (s/veh)	-	-	9.2	0	25.9
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.4	-	2.2

Intersection	
Int Delay, s/veh	22.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	120	660	140	90	860
Future Vol, veh/h	90	120	660	140	90	860
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	94	125	688	146	94	896

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1844	760	0	0	833	0
Stage 1	760	-	-	-	-	-
Stage 2	1083	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.218	-
Pot Cap-1 Maneuver	109	456	-	-	800	-
Stage 1	518	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	96	456	-	-	800	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	315	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	203.52	0	0.96
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	175	800	-
HCM Lane V/C Ratio	-	-	1.251	0.117	-
HCM Control Delay (s/veh)	-	-	203.5	10.1	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	12.2	0.4	-

Intersection	
Int Delay, s/veh	30.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Future Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	22	22	5	5	71	22	758	11	55	1000	44

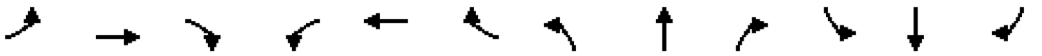
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1937	1945	1022	1929	1962	764	1044	0	0	769	0	0
Stage 1	1132	1132	-	808	808	-	-	-	-	-	-	-
Stage 2	805	813	-	1121	1154	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	49	65	287	50	63	404	666	-	-	845	-	-
Stage 1	247	278	-	375	394	-	-	-	-	-	-	-
Stage 2	376	392	-	251	272	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 29	52	287	23	50	404	666	-	-	845	-	-
Mov Cap-2 Maneuver	~ 29	52	-	23	50	-	-	-	-	-	-	-
Stage 1	208	235	-	353	371	-	-	-	-	-	-	-
Stage 2	287	369	-	177	229	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $/6	661.38	50.62	0.29	0.48
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	50	-	-	44	157	89	-	-
HCM Lane V/C Ratio	0.033	-	-	1.994	0.524	0.065	-	-
HCM Control Delay (s/veh)	10.6	0	-	$ 661.4	50.6	9.6	0	-
HCM Lane LOS	B	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	9.1	2.6	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Part 3: 2023 Existing Conditions: Weekend Saturday PM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Future Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	10	198	73	5	31	292	385	52	83	833	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	34	386	168	31	189	372	1968	264	106	1997	74
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.62	0.62	0.06	0.57	0.57
Sat Flow, veh/h	1028	251	1585	1174	225	1394	3456	3149	422	1781	3494	130
Grp Volume(v), veh/h	62	0	198	73	0	36	292	216	221	83	424	440
Grp Sat Flow(s),veh/h/ln	1279	0	1585	1174	0	1619	1728	1777	1794	1781	1777	1847
Q Serve(g_s), s	3.5	0.0	10.8	6.1	0.0	2.0	8.2	5.2	5.3	4.6	13.4	13.4
Cycle Q Clear(g_c), s	5.4	0.0	10.8	11.5	0.0	2.0	8.2	5.2	5.3	4.6	13.4	13.4
Prop In Lane	0.84		1.00	1.00		0.86	1.00		0.24	1.00		0.07
Lane Grp Cap(c), veh/h	240	0	386	168	0	220	372	1110	1121	106	1016	1056
V/C Ratio(X)	0.26	0.00	0.51	0.44	0.00	0.16	0.78	0.19	0.20	0.78	0.42	0.42
Avail Cap(c_a), veh/h	260	0	408	184	0	243	570	1110	1121	107	1016	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	32.7	45.0	0.0	38.2	43.5	8.0	8.0	46.4	12.0	12.0
Incr Delay (d2), s/veh	0.6	0.0	1.1	1.8	0.0	0.3	3.9	0.4	0.4	30.6	1.3	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	4.2	1.8	0.0	0.8	3.7	2.0	2.0	2.9	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.8	0.0	33.8	46.8	0.0	38.5	47.3	8.4	8.4	77.0	13.3	13.3
LnGrp LOS	D		C	D		D	D	A	A	E	B	B
Approach Vol, veh/h		260			109			729			947	
Approach Delay, s/veh		35.4			44.1			24.0			18.9	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	67.5		19.6	18.3	62.2		19.6				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	6.0	61.0		15.0	16.5	50.0		15.0				
Max Q Clear Time (g_c+I1), s	6.6	7.3		12.8	10.2	15.4		13.5				
Green Ext Time (p_c), s	0.0	2.9		0.2	0.5	6.4		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		24.1
HCM 7th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Future Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	64	0	62	31	21	639	619	72	10	814	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	211		122	53	27	725	2214	257	22	1751	
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.11	0.21	0.69	0.69	0.02	0.99	0.00
Sat Flow, veh/h	1352	1870	1585	587	471	239	3456	3208	372	1781	3554	1585
Grp Volume(v), veh/h	52	64	0	114	0	0	639	342	349	10	814	0
Grp Sat Flow(s),veh/h/ln	1352	1870	1585	1297	0	0	1728	1777	1803	1781	1777	1585
Q Serve(g_s), s	0.0	3.1	0.0	5.8	0.0	0.0	17.9	7.4	7.4	0.6	0.6	0.0
Cycle Q Clear(g_c), s	4.1	3.1	0.0	8.9	0.0	0.0	17.9	7.4	7.4	0.6	0.6	0.0
Prop In Lane	1.00		1.00	0.54		0.18	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	209	211		202	0	0	725	1227	1245	22	1751	
V/C Ratio(X)	0.25	0.30		0.57	0.00	0.00	0.88	0.28	0.28	0.46	0.46	
Avail Cap(c_a), veh/h	334	383		340	0	0	829	1227	1245	107	1751	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	0.90	0.90	0.00
Uniform Delay (d), s/veh	41.2	40.8	0.0	43.7	0.0	0.0	38.3	5.9	5.9	48.5	0.4	0.0
Incr Delay (d2), s/veh	0.6	0.8	0.0	2.5	0.0	0.0	9.2	0.5	0.5	13.2	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.5	0.0	2.9	0.0	0.0	8.4	2.6	2.6	0.3	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.8	41.6	0.0	46.2	0.0	0.0	47.5	6.5	6.5	61.7	1.2	0.0
LnGrp LOS	D	D		D			D	A	A	E	A	
Approach Vol, veh/h		116			114			1330			824	
Approach Delay, s/veh		41.7			46.2			26.2			1.9	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	74.0		18.8	27.0	54.3		18.8				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	6.0	55.0		20.5	24.0	37.0		20.5				
Max Q Clear Time (g_c+I1), s	2.6	9.4		6.1	19.9	2.6		10.9				
Green Ext Time (p_c), s	0.0	5.0		0.3	1.0	6.7		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	19.5	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Future Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1313	0	0	1111	788	162	162	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2910		0	2910	1298	235	235	
Arrive On Green			0.00	0.81	0.00	0.00	0.54	0.54	0.07	0.07	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1313	0	0	1111	788	162	162	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	10.8	0.0	0.0	17.8	33.6	4.5	4.5	0.0
Cycle Q Clear(g_c), s			0.0	10.8	0.0	0.0	17.8	33.6	4.5	4.5	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2910		0	2910	1298	235	235	
V/C Ratio(X)			0.00	0.45		0.00	0.38	0.61	0.69	0.69	
Avail Cap(c_a), veh/h			0	2910		0	2910	1298	488	488	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.88	0.00	0.00	0.65	0.65	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	2.8	0.0	0.0	8.3	11.9	45.6	45.6	0.0
Incr Delay (d2), s/veh			0.0	0.4	0.0	0.0	0.2	1.4	3.6	3.6	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	2.6	0.0	0.0	7.6	13.1	2.1	2.1	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.2	0.0	0.0	8.6	13.3	49.2	49.2	0.0
LnGrp LOS				A			A	B	D	D	
Approach Vol, veh/h				1313			1899		162	162	
Approach Delay, s/veh				3.2			10.5		49.2	49.2	
Approach LOS				A			B		D	D	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	86.3		13.7		86.3						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	74.0		14.0		74.0						
Max Q Clear Time (g_c+I1), s	35.6		6.5		12.8						
Green Ext Time (p_c), s	16.8		0.3		14.9						

Intersection Summary	
HCM 7th Control Delay, s/veh	9.5
HCM 7th LOS	A

Notes

Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Future Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	567	1216	258	124	1144	62	247	72	93	52	72	588
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	658	1810	384	153	1610	87	434	222	287	195	251	476
Arrive On Green	0.19	0.43	0.43	0.09	0.32	0.32	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	3456	4218	895	1781	4958	269	1502	741	957	480	837	1585
Grp Volume(v), veh/h	567	981	493	124	785	421	247	0	165	124	0	588
Grp Sat Flow(s),veh/h/ln	1728	1702	1709	1781	1702	1822	751	0	1698	1318	0	1585
Q Serve(g_s), s	15.9	23.1	23.1	6.8	20.3	20.3	15.9	0.0	7.5	3.2	0.0	30.0
Cycle Q Clear(g_c), s	15.9	23.1	23.1	6.8	20.3	20.3	26.6	0.0	7.5	10.7	0.0	30.0
Prop In Lane	1.00		0.52	1.00		0.15	1.00		0.56	0.42		1.00
Lane Grp Cap(c), veh/h	658	1460	733	153	1105	592	434	0	509	446	0	476
V/C Ratio(X)	0.86	0.67	0.67	0.81	0.71	0.71	0.57	0.00	0.32	0.28	0.00	1.24
Avail Cap(c_a), veh/h	812	1460	733	187	1105	592	434	0	509	446	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	22.9	22.9	44.9	29.6	29.6	39.0	0.0	27.1	28.1	0.0	35.0
Incr Delay (d2), s/veh	7.0	2.2	4.3	19.2	3.9	7.1	1.8	0.0	0.4	0.3	0.0	123.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	9.4	9.8	3.8	8.7	9.8	3.0	0.0	3.1	2.4	0.0	27.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.3	25.1	27.2	64.1	33.5	36.8	40.7	0.0	27.5	28.4	0.0	158.5
LnGrp LOS	D	C	C	E	C	D	D		C	C		F
Approach Vol, veh/h		2041			1330			412			712	
Approach Delay, s/veh		31.5			37.4			35.4			135.8	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.5	37.5		36.0	16.1	47.9		36.0				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	23.5	28.0		30.0	10.5	41.0		30.0				
Max Q Clear Time (g_c+I1), s	17.9	22.3		28.6	8.8	25.1		32.0				
Green Ext Time (p_c), s	1.1	3.6		0.4	0.0	9.2		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			50.1									
HCM 7th LOS			D									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Future Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	632	789	0	0	842	242	0	0	0	119	0	506
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	728	2497	0	0	1499	669	0	351	0	406	0	594
Arrive On Green	0.21	0.70	0.00	0.00	0.42	0.42	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	632	789	0	0	842	242	0	0	0	119	0	506
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	17.7	8.5	0.0	0.0	18.0	10.4	0.0	0.0	0.0	5.8	0.0	15.4
Cycle Q Clear(g_c), s	17.7	8.5	0.0	0.0	18.0	10.4	0.0	0.0	0.0	5.8	0.0	15.4
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	728	2497	0	0	1499	669	0	351	0	406	0	594
V/C Ratio(X)	0.87	0.32	0.00	0.00	0.56	0.36	0.00	0.00	0.00	0.29	0.00	0.85
Avail Cap(c_a), veh/h	898	2497	0	0	1499	669	0	430	0	482	0	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.79	0.79	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	5.7	0.0	0.0	21.9	19.7	0.0	0.0	0.0	35.4	0.0	39.3
Incr Delay (d2), s/veh	7.7	0.3	0.0	0.0	1.2	1.2	0.0	0.0	0.0	0.4	0.0	8.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	2.8	0.0	0.0	7.5	4.0	0.0	0.0	0.0	2.6	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.8	6.0	0.0	0.0	23.1	20.9	0.0	0.0	0.0	35.8	0.0	47.4
LnGrp LOS	D	A			C	C				D		D
Approach Vol, veh/h		1421			1084			0			625	
Approach Delay, s/veh		23.7			22.6			0.0			45.1	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	28.1	47.2		24.7		75.3		24.7				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	26.0	33.0		23.0		66.0		23.0				
Max Q Clear Time (g_c+I1), s	19.7	20.0		0.0		10.5		17.4				
Green Ext Time (p_c), s	1.4	5.6		0.0		6.8		1.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	27.6	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Future Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	137	1	21	0	1084	179	21	937	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	0
Cap, veh/h	0	221	0	238	1	266	2	1957	322	88	2683	0
Arrive On Green	0.00	0.00	0.00	0.12	0.12	0.12	0.00	0.65	0.65	0.05	0.76	0.00
Sat Flow, veh/h	0	1856	0	1399	10	1572	1767	3029	499	1767	3618	0
Grp Volume(v), veh/h	0	0	0	138	0	21	0	630	633	21	937	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1409	0	1572	1767	1763	1766	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	9.6	0.0	1.1	0.0	19.7	19.8	1.1	8.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.6	0.0	1.1	0.0	19.7	19.8	1.1	8.7	0.0
Prop In Lane	0.00		0.00	0.99		1.00	1.00		0.28	1.00		0.00
Lane Grp Cap(c), veh/h	0	221	0	239	0	266	2	1139	1141	88	2683	0
V/C Ratio(X)	0.00	0.00	0.00	0.58	0.00	0.08	0.00	0.55	0.56	0.24	0.35	0.00
Avail Cap(c_a), veh/h	0	399	0	375	0	417	115	1139	1141	115	2683	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.28	0.28	0.93	0.93	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.0	0.0	35.0	0.0	9.8	9.8	45.7	3.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.1	0.0	0.5	0.6	1.3	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.4	0.0	0.4	0.0	7.0	7.1	0.5	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	45.2	0.0	35.1	0.0	10.3	10.3	46.9	4.2	0.0
LnGrp LOS				D		D		B	B	D	A	
Approach Vol, veh/h		0			159			1263			958	
Approach Delay, s/veh		0.0			43.9			10.3			5.2	
Approach LOS					D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	70.1		18.4	0.0	81.6		18.4				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	6.5	53.5		21.5	6.5	53.5		21.5				
Max Q Clear Time (g_c+I1), s	3.1	21.8		0.0	0.0	10.7		11.6				
Green Ext Time (p_c), s	0.0	11.0		0.0	0.0	8.4		0.5				

Intersection Summary			
HCM 7th Control Delay, s/veh		10.5	
HCM 7th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h	11	0	11	21	11	53	11	684	0	0	737	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	0	0	1	1
Cap, veh/h	242	13	80	181	23	97	123	1078	0	0	1006	72
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.58	0.58	0.00	0.00	0.58	0.58
Sat Flow, veh/h	684	136	820	361	240	997	8	1862	0	0	1738	125
Grp Volume(v), veh/h	22	0	0	85	0	0	695	0	0	0	0	790
Grp Sat Flow(s),veh/h/ln	1639	0	0	1599	0	0	1871	0	0	0	0	1863
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.5	0.0	0.0	7.6	0.0	0.0	0.0	0.0	9.6
Prop In Lane	0.50		0.50	0.25		0.62	0.02		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	334	0	0	301	0	0	1201	0	0	0	0	1078
V/C Ratio(X)	0.07	0.00	0.00	0.28	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.73
Avail Cap(c_a), veh/h	903	0	0	915	0	0	2221	0	0	0	0	2113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	13.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.8	0.0	0.0	13.8	0.0	0.0	4.8	0.0	0.0	0.0	0.0	5.7
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		22			85			695			790	
Approach Delay, s/veh		12.8			13.8			4.8			5.7	
Approach LOS		B			B			A			A	

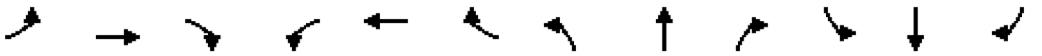
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.9		8.0		22.9		8.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		15.0		35.0		15.0				
Max Q Clear Time (g_c+I1), s		9.6		2.4		11.6		3.5				
Green Ext Time (p_c), s		5.4		0.0		6.3		0.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			5.8									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	260	170	480	250	180	480
Future Volume (veh/h)	260	170	480	250	180	480
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	271	177	500	260	188	500
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	364	324	664	886	238	1106
Arrive On Green	0.20	0.20	0.36	0.36	0.13	0.59
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	271	177	500	260	188	500
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	7.0	4.9	11.5	4.2	5.0	7.3
Cycle Q Clear(g_c), s	7.0	4.9	11.5	4.2	5.0	7.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	364	324	664	886	238	1106
V/C Ratio(X)	0.75	0.55	0.75	0.29	0.79	0.45
Avail Cap(c_a), veh/h	583	519	1148	1297	328	1684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	17.4	13.9	5.7	20.5	5.6
Incr Delay (d2), s/veh	3.0	1.4	1.8	0.2	8.5	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.7	4.3	1.9	2.4	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.3	18.9	15.6	5.9	29.0	5.9
LnGrp LOS	C	B	B	A	C	A
Approach Vol, veh/h	448		760			688
Approach Delay, s/veh	20.3		12.3			12.2
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.5	22.4				33.9	15.0
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	7.0	13.5				9.3	9.0
Green Ext Time (p_c), s	0.1	3.9				3.6	0.9

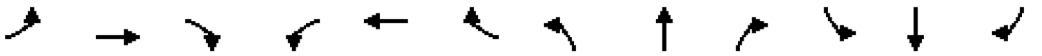
Intersection Summary	
HCM 7th Control Delay, s/veh	14.2
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Future Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	32	247				237	548	0	11	452	290
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	376	42	328				490	1230	0	53	942	812
Arrive On Green	0.23	0.23	0.23				0.08	0.66	0.00	0.51	0.51	0.51
Sat Flow, veh/h	1639	185	1428				1781	1870	0	14	1840	1585
Grp Volume(v), veh/h	312	0	279				237	548	0	463	0	290
Grp Sat Flow(s),veh/h/ln	1639	0	1613				1781	1870	0	1854	0	1585
Q Serve(g_s), s	14.5	0.0	12.9				4.7	11.3	0.0	0.0	0.0	8.7
Cycle Q Clear(g_c), s	14.5	0.0	12.9				4.7	11.3	0.0	12.8	0.0	8.7
Prop In Lane	1.00		0.89				1.00		0.00	0.02		1.00
Lane Grp Cap(c), veh/h	376	0	370				490	1230	0	996	0	812
V/C Ratio(X)	0.83	0.00	0.75				0.48	0.45	0.00	0.47	0.00	0.36
Avail Cap(c_a), veh/h	512	0	504				498	1230	0	996	0	812
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	0.00	0.82	0.00	0.82
Uniform Delay (d), s/veh	29.3	0.0	28.7				8.7	6.6	0.0	12.6	0.0	11.6
Incr Delay (d2), s/veh	8.1	0.0	4.3				0.7	1.2	0.0	1.3	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	5.2				1.6	4.1	0.0	5.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.4	0.0	33.0				9.4	7.8	0.0	13.9	0.0	12.7
LnGrp LOS	D		C				A	A		B		B
Approach Vol, veh/h		591						785			753	
Approach Delay, s/veh		35.3						8.3			13.4	
Approach LOS		D						A			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		57.6		22.4	11.7	46.0						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		46.0		25.0	7.0	34.0						
Max Q Clear Time (g_c+I1), s		13.3		16.5	6.7	14.8						
Green Ext Time (p_c), s		4.0		1.9	0.0	3.9						

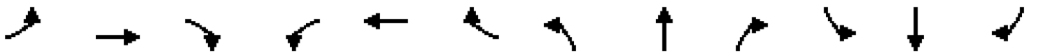
Intersection Summary		
HCM 7th Control Delay, s/veh		17.6
HCM 7th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Future Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	284	358	168	305	84	347	358	200	84	368	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	354	320	318	532	147	414	614	520	110	502	15
Arrive On Green	0.20	0.20	0.20	0.10	0.38	0.38	0.23	0.33	0.33	0.06	0.14	0.14
Sat Flow, veh/h	62	1754	1585	1781	1412	389	1781	1870	1585	1781	3523	105
Grp Volume(v), veh/h	305	0	358	168	0	389	347	358	200	84	185	194
Grp Sat Flow(s),veh/h/ln	1816	0	1585	1781	0	1800	1781	1870	1585	1781	1777	1851
Q Serve(g_s), s	3.9	0.0	13.0	4.5	0.0	11.1	12.0	10.2	6.2	3.0	6.4	6.5
Cycle Q Clear(g_c), s	10.3	0.0	13.0	4.5	0.0	11.1	12.0	10.2	6.2	3.0	6.4	6.5
Prop In Lane	0.07		1.00	1.00		0.22	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	426	0	320	318	0	678	414	614	520	110	253	264
V/C Ratio(X)	0.72	0.00	1.12	0.53	0.00	0.57	0.84	0.58	0.38	0.76	0.73	0.73
Avail Cap(c_a), veh/h	426	0	320	394	0	755	968	871	738	498	331	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	25.7	17.4	0.0	16.0	23.6	18.0	16.6	29.7	26.4	26.4
Incr Delay (d2), s/veh	5.6	0.0	86.3	1.4	0.0	0.9	4.6	0.9	0.5	10.3	5.7	5.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	12.2	1.8	0.0	4.3	5.2	4.2	2.2	1.5	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.2	0.0	112.0	18.8	0.0	16.8	28.2	18.8	17.1	40.1	32.2	32.1
LnGrp LOS	C		F	B		B	C	B	B	D	C	C
Approach Vol, veh/h		663			557			905			463	
Approach Delay, s/veh		74.4			17.4			22.0			33.6	
Approach LOS		E			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	26.1	11.3	18.0	21.0	14.2		29.3				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	30.0	9.0	13.0	35.0	12.0		27.0				
Max Q Clear Time (g_c+I1), s	5.0	12.2	6.5	15.0	14.0	8.5		13.1				
Green Ext Time (p_c), s	0.1	2.7	0.1	0.0	1.0	0.7		2.0				

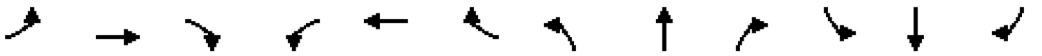
Intersection Summary	
HCM 7th Control Delay, s/veh	36.5
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Future Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	0	20	0	0	0	20	837	0	0	878	61
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	0	121	0	107	0	35	1393	0	0	1083	75
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.02	0.74	0.00	0.00	0.63	0.63
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1729	120
Grp Volume(v), veh/h	61	0	20	0	0	0	20	837	0	0	0	939
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	2.1	0.0	0.6	0.0	0.0	0.0	0.6	10.4	0.0	0.0	0.0	19.5
Cycle Q Clear(g_c), s	2.1	0.0	0.6	0.0	0.0	0.0	0.6	10.4	0.0	0.0	0.0	19.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	224	0	121	0	107	0	35	1393	0	0	0	1158
V/C Ratio(X)	0.27	0.00	0.16	0.00	0.00	0.00	0.58	0.60	0.00	0.00	0.00	0.81
Avail Cap(c_a), veh/h	423	0	345	0	370	0	247	3148	0	0	0	2672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	21.8	0.0	0.0	0.0	24.6	3.0	0.0	0.0	0.0	7.2
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.0	0.0	0.0	14.4	0.4	0.0	0.0	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.2	0.0	0.0	0.0	0.4	1.2	0.0	0.0	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.1	0.0	22.4	0.0	0.0	0.0	39.0	3.4	0.0	0.0	0.0	8.6
LnGrp LOS	C		C				D	A				A
Approach Vol, veh/h		81			0			857			939	
Approach Delay, s/veh		23.7			0.0			4.2			8.6	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		42.6		7.9	6.0	36.6		7.9				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		85.0		10.0	7.0	73.0		10.0				
Max Q Clear Time (g_c+I1), s		12.4		4.1	2.6	21.5		0.0				
Green Ext Time (p_c), s		8.2		0.1	0.0	10.2		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		7.2
HCM 7th LOS		A



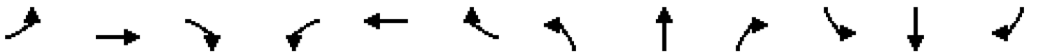
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Future Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	0	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	211	0	63	0	0	0	74	547	0	0	558	0
Peak Hour Factor	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	3	3	3	0	3	3	3	3	3	3	3	0
Cap, veh/h	493	0	286	0	338	0	150	735	0	0	923	0
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.50	0.00
Sat Flow, veh/h	1767	0	1572	0	1856	0	109	1478	0	0	1856	0
Grp Volume(v), veh/h	211	0	63	0	0	0	621	0	0	0	558	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572	0	1856	0	1587	0	0	0	1856	0
Q Serve(g_s), s	4.7	0.0	1.4	0.0	0.0	0.0	4.8	0.0	0.0	0.0	9.1	0.0
Cycle Q Clear(g_c), s	4.7	0.0	1.4	0.0	0.0	0.0	13.9	0.0	0.0	0.0	9.1	0.0
Prop In Lane	1.00		1.00	0.00		0.00	0.12		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	493	0	286	0	338	0	885	0	0	0	923	0
V/C Ratio(X)	0.43	0.00	0.22	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.60	0.00
Avail Cap(c_a), veh/h	1052	0	784	0	947	0	1831	0	0	0	2004	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	16.0	0.0	14.7	0.0	0.0	0.0	8.5	0.0	0.0	0.0	7.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.4	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.5	0.0	0.0	0.0	3.0	0.0	0.0	0.0	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.6	0.0	15.1	0.0	0.0	0.0	9.5	0.0	0.0	0.0	8.3	0.0
LnGrp LOS	B		B				A				A	
Approach Vol, veh/h		274			0			621			558	
Approach Delay, s/veh		16.2			0.0			9.5			8.3	
Approach LOS		B						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.5		13.7		28.5		13.7				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		45.5		21.0		45.5		* 22				
Max Q Clear Time (g_c+I1), s		15.9		6.7		11.1		0.0				
Green Ext Time (p_c), s		5.1		0.8		4.1		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.3
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Future Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	5	0	5	1	0	0	5	573	0	0	573	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	149	0	17	210	0	0	91	1355	0	0	1346	12
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.73
Sat Flow, veh/h	746	0	746	1504	0	0	3	1848	0	0	1837	16
Grp Volume(v), veh/h	10	0	0	1	0	0	578	0	0	0	0	578
Grp Sat Flow(s),veh/h/ln	1493	0	0	1504	0	0	1852	0	0	0	0	1853
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	5.0
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.01
Lane Grp Cap(c), veh/h	166	0	0	210	0	0	1446	0	0	0	0	1358
V/C Ratio(X)	0.06	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.43
Avail Cap(c_a), veh/h	567	0	0	589	0	0	1446	0	0	0	0	1358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	0.0	19.6	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		10			1			578			578	
Approach Delay, s/veh		19.8			19.6			2.3			2.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		4.9		36.0		4.9				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		6.9		2.3		7.0		2.0				
Green Ext Time (p_c), s		4.0		0.0		4.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			2.5									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	660	5	20	740	5	20
Future Vol, veh/h	660	5	20	740	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	5	22	804	5	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	723	0	1568	720
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	848	-
Critical Hdwy	-	-	4.12	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	879	-	158	481
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	467	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	879	-	151	481
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	446	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.24	16.73
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	334	47	-	-	-
HCM Lane V/C Ratio	0.081	0.025	-	-	-
HCM Control Delay (s/veh)	16.7	9.2	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	20	700	650	50	30	40
Future Vol, veh/h	20	700	650	50	30	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	761	707	54	33	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	761	0	-	0	1538	734
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	851	-	-	-	164	472
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	851	-	-	-	157	472
Mov Cap-2 Maneuver	-	-	-	-	157	-
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	491	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0.26	0	25.17
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	50	-	254
HCM Lane V/C Ratio	-	-	0.026	-	0.3
HCM Control Delay (s/veh)	-	-	9.3	0	25.2
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.1	-	1.2

Intersection	
Int Delay, s/veh	9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	70	730	90	70	770
Future Vol, veh/h	80	70	730	90	70	770
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	73	760	94	73	802

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1755	807	0	0	854	0
Stage 1	807	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.218	-
Pot Cap-1 Maneuver	123	429	-	-	785	-
Stage 1	489	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	111	429	-	-	785	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/veh	103.43	0	0.84
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	170	785	-
HCM Lane V/C Ratio	-	-	0.919	0.093	-
HCM Control Delay (s/veh)	-	-	103.4	10.1	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	6.8	0.3	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Future Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	11	11	5	43	5	815	11	22	826	65

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1731	1739	859	1704	1766	821	891	0	0	826	0	0
Stage 1	902	902	-	832	832	-	-	-	-	-	-	-
Stage 2	829	837	-	872	935	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	127	125	402	131	121	422	761	-	-	805	-	-
Stage 1	430	428	-	467	465	-	-	-	-	-	-	-
Stage 2	468	462	-	445	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	101	117	402	114	113	422	761	-	-	805	-	-
Mov Cap-2 Maneuver	101	117	-	114	113	-	-	-	-	-	-	-
Stage 1	407	405	-	461	459	-	-	-	-	-	-	-
Stage 2	410	456	-	404	390	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	34.2	24.64	0.06	0.23
HCM LOS	D	C		

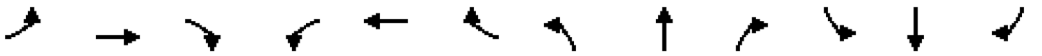
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	12	-	-	150	242	42	-	-
HCM Lane V/C Ratio	0.007	-	-	0.181	0.247	0.027	-	-
HCM Control Delay (s/veh)	9.8	0	-	34.2	24.6	9.6	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.9	0.1	-	-

Part 4: 2035 No Build Conditions: Weekday AM Peak-Hour LOS and Delays

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Future Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	46	11	114	68	11	34	433	933	398	137	569	148
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	155	31	409	129	43	134	520	1515	640	166	1566	406
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.15	0.63	0.63	0.09	0.57	0.57
Sat Flow, veh/h	875	283	1560	1246	396	1224	3401	2395	1012	1753	2748	713
Grp Volume(v), veh/h	57	0	114	68	0	45	433	679	652	137	361	356
Grp Sat Flow(s),veh/h/ln	1157	0	1560	1246	0	1620	1700	1749	1659	1753	1749	1712
Q Serve(g_s), s	3.6	0.0	6.4	5.6	0.0	2.8	13.6	25.6	26.2	8.4	12.3	12.4
Cycle Q Clear(g_c), s	6.4	0.0	6.4	12.0	0.0	2.8	13.6	25.6	26.2	8.4	12.3	12.4
Prop In Lane	0.81		1.00	1.00		0.76	1.00		0.61	1.00		0.42
Lane Grp Cap(c), veh/h	185	0	409	129	0	177	520	1106	1049	166	996	976
V/C Ratio(X)	0.31	0.00	0.28	0.53	0.00	0.25	0.83	0.61	0.62	0.83	0.36	0.36
Avail Cap(c_a), veh/h	185	0	409	129	0	177	819	1106	1049	239	996	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	32.3	52.4	0.0	44.9	45.2	12.1	12.2	48.9	12.8	12.8
Incr Delay (d2), s/veh	0.9	0.0	0.4	3.9	0.0	0.7	3.3	1.9	2.1	14.4	1.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	2.5	2.0	0.0	1.2	5.9	9.9	9.6	4.3	5.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.1	0.0	32.7	56.3	0.0	45.7	48.5	14.1	14.4	63.3	13.9	13.9
LnGrp LOS	D		C	E		D	D	B	B	E	B	B
Approach Vol, veh/h		171			113			1764			854	
Approach Delay, s/veh		37.8			52.1			22.6			21.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.4	74.6		18.0	24.3	67.7		18.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	15.0	65.0		12.0	26.5	53.0		12.0				
Max Q Clear Time (g_c+I1), s	10.4	28.2		8.4	15.6	14.4		14.0				
Green Ext Time (p_c), s	0.1	12.9		0.2	1.2	5.3		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		24.4
HCM 7th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Future Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	192	0	0	11	11	11	502	1463	11	11	491	0
Peak Hour Factor	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	379	0		72	64	47	566	2585	19	23	2005	
Arrive On Green	0.09	0.00	0.00	0.09	0.09	0.09	0.17	0.73	0.73	0.03	1.00	0.00
Sat Flow, veh/h	2713	0	1547	334	747	541	3374	3529	27	1739	3469	1547
Grp Volume(v), veh/h	192	0	0	33	0	0	502	719	755	11	491	0
Grp Sat Flow(s),veh/h/ln	1357	0	1547	1622	0	0	1687	1735	1821	1739	1735	1547
Q Serve(g_s), s	5.1	0.0	0.0	0.0	0.0	0.0	16.0	20.8	20.8	0.7	0.0	0.0
Cycle Q Clear(g_c), s	7.1	0.0	0.0	2.0	0.0	0.0	16.0	20.8	20.8	0.7	0.0	0.0
Prop In Lane	1.00		1.00	0.33		0.33	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	379	0		184	0	0	566	1271	1334	23	2005	
V/C Ratio(X)	0.51	0.00		0.18	0.00	0.00	0.89	0.57	0.57	0.49	0.24	
Avail Cap(c_a), veh/h	626	0		326	0	0	613	1271	1334	95	2005	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.67	0.67	0.67	0.94	0.94	0.00
Uniform Delay (d), s/veh	49.0	0.0	0.0	46.8	0.0	0.0	44.8	6.7	6.7	53.2	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.5	0.0	0.0	10.0	1.2	1.2	14.5	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.9	0.0	0.0	7.4	6.9	7.3	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.0	0.0	0.0	47.3	0.0	0.0	54.8	7.9	7.9	67.7	0.3	0.0
LnGrp LOS	D			D			D	A	A	E	A	
Approach Vol, veh/h		192			33			1976			502	
Approach Delay, s/veh		50.0			47.3			19.8			1.8	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	85.6		17.0	24.4	68.6		17.0				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	6.0	66.0		19.5	20.0	52.0		19.5				
Max Q Clear Time (g_c+I1), s	2.7	22.8		9.1	18.0	2.0		4.0				
Green Ext Time (p_c), s	0.0	15.4		0.4	0.4	3.8		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	19.0	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Future Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1811	1811	0	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h			0	739	0	0	1478	0	518	518	0
Peak Hour Factor			0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %			0	6	6	0	6	6	6	6	6
Cap, veh/h			0	2432		0	2432		616	616	
Arrive On Green			0.00	0.71	0.00	0.00	1.00	0.00	0.18	0.18	0.00
Sat Flow, veh/h			0	3532	1535	0	3532	1535	3346	3346	1535
Grp Volume(v), veh/h			0	739	0	0	1478	0	518	518	0
Grp Sat Flow(s),veh/h/ln			0	1721	1535	0	1721	1535	1673	1673	1535
Q Serve(g_s), s			0.0	8.8	0.0	0.0	0.0	0.0	16.4	16.4	0.0
Cycle Q Clear(g_c), s			0.0	8.8	0.0	0.0	0.0	0.0	16.4	16.4	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2432		0	2432		616	616	
V/C Ratio(X)			0.00	0.30		0.00	0.61		0.84	0.84	
Avail Cap(c_a), veh/h			0	2432		0	2432		1095	1095	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.97	0.00	0.00	0.80	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	6.0	0.0	0.0	0.0	0.0	43.3	43.3	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0	0.9	0.0	3.2	3.2	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	3.0	0.0	0.0	0.3	0.0	7.0	7.0	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	6.3	0.0	0.0	0.9	0.0	46.5	46.5	0.0
LnGrp LOS				A			A		D	D	
Approach Vol, veh/h				739			1478		518	518	
Approach Delay, s/veh				6.3			0.9		46.5	46.5	
Approach LOS				A			A		D	D	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	82.8		27.2		82.8						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	62.0		36.0		62.0						
Max Q Clear Time (g_c+I1), s	2.0		18.4		10.8						
Green Ext Time (p_c), s	18.6		1.8		6.2						

Intersection Summary											
HCM 7th Control Delay, s/veh			11.0								
HCM 7th LOS			B								

Notes

Unsignalized Delay for [NER, NWR, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Future Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	68	911	262	91	1434	23	319	34	34	23	80	285
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	134	2011	576	115	2774	44	512	204	204	108	348	376
Arrive On Green	0.04	0.52	0.52	0.07	0.55	0.55	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	3374	3848	1103	1739	5053	81	1926	838	838	280	1433	1547
Grp Volume(v), veh/h	68	786	387	91	943	514	319	0	68	103	0	285
Grp Sat Flow(s),veh/h/ln	1687	1662	1627	1739	1662	1811	963	0	1675	1713	0	1547
Q Serve(g_s), s	2.2	16.3	16.4	5.7	19.7	19.7	17.5	0.0	3.5	0.0	0.0	18.8
Cycle Q Clear(g_c), s	2.2	16.3	16.4	5.7	19.7	19.7	22.5	0.0	3.5	5.0	0.0	18.8
Prop In Lane	1.00		0.68	1.00		0.04	1.00		0.50	0.22		1.00
Lane Grp Cap(c), veh/h	134	1737	851	115	1824	994	512	0	407	456	0	376
V/C Ratio(X)	0.51	0.45	0.45	0.79	0.52	0.52	0.62	0.00	0.17	0.23	0.00	0.76
Avail Cap(c_a), veh/h	199	1737	851	198	1824	994	849	0	701	750	0	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	16.4	16.4	50.6	15.6	15.6	42.4	0.0	32.8	33.4	0.0	38.6
Incr Delay (d2), s/veh	2.8	0.8	1.7	11.5	1.1	1.9	1.2	0.0	0.2	0.2	0.0	3.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.2	6.3	2.8	7.4	8.4	4.2	0.0	1.5	2.2	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.6	17.2	18.1	62.1	16.7	17.5	43.7	0.0	33.0	33.6	0.0	41.8
LnGrp LOS	D	B	B	E	B	B	D		C	C		D
Approach Vol, veh/h		1241			1548			387			388	
Approach Delay, s/veh		19.5			19.6			41.8			39.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	65.4		32.7	14.8	62.5		32.7				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	6.5	39.0		46.0	12.5	33.0		46.0				
Max Q Clear Time (g_c+I1), s	4.2	21.7		24.5	7.7	18.4		20.8				
Green Ext Time (p_c), s	0.0	9.5		2.2	0.1	7.0		1.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			24.2									
HCM 7th LOS			C									

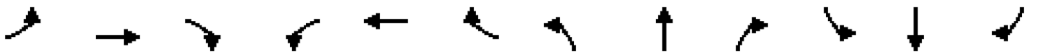
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Future Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	0	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	154	640	0	0	1489	66	0	6	0	48	0	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	0	6	6	6	6	6	6	6	6
Cap, veh/h	216	2953	0	0	2513	1121	0	76	0	236	0	64
Arrive On Green	0.06	0.86	0.00	0.00	0.73	0.73	0.00	0.04	0.00	0.04	0.00	0.04
Sat Flow, veh/h	3346	3532	0	0	3532	1535	0	1811	0	2730	0	1535
Grp Volume(v), veh/h	154	640	0	0	1489	66	0	6	0	48	0	28
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1535	0	1811	0	1365	0	1535
Q Serve(g_s), s	5.0	3.6	0.0	0.0	22.6	1.3	0.0	0.4	0.0	1.9	0.0	2.0
Cycle Q Clear(g_c), s	5.0	3.6	0.0	0.0	22.6	1.3	0.0	0.4	0.0	2.2	0.0	2.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	2953	0	0	2513	1121	0	76	0	236	0	64
V/C Ratio(X)	0.71	0.22	0.00	0.00	0.59	0.06	0.00	0.08	0.00	0.20	0.00	0.44
Avail Cap(c_a), veh/h	365	2953	0	0	2513	1121	0	148	0	346	0	126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.65	0.65	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	1.4	0.0	0.0	7.1	4.2	0.0	50.7	0.0	51.8	0.0	51.4
Incr Delay (d2), s/veh	4.4	0.2	0.0	0.0	0.7	0.1	0.0	0.4	0.0	0.4	0.0	4.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.6	0.0	0.0	7.3	0.4	0.0	0.2	0.0	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	1.5	0.0	0.0	7.7	4.3	0.0	51.1	0.0	52.2	0.0	56.1
LnGrp LOS	D	A			A	A		D		D		E
Approach Vol, veh/h		794			1555			6			76	
Approach Delay, s/veh		11.9			7.6			51.1			53.6	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.1	85.3		10.6		99.4		10.6				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	12.0	71.0		9.0		90.0		9.0				
Max Q Clear Time (g_c+I1), s	7.0	24.6		2.4		5.6		4.2				
Green Ext Time (p_c), s	0.2	18.0		0.0		5.2		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	10.5	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Future Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	23	6	12	12	0	12	23	1565	161	58	794	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	81	12	17	134	0	145	40	2325	237	89	2659	40
Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.04	0.02	0.74	0.74	0.05	0.77	0.77
Sat Flow, veh/h	690	272	398	1620	0	1535	1725	3153	321	1725	3470	52
Grp Volume(v), veh/h	41	0	0	12	0	12	23	847	879	58	394	412
Grp Sat Flow(s),veh/h/ln	1361	0	0	1620	0	1535	1725	1721	1753	1725	1721	1802
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.8	1.5	28.0	29.1	3.6	7.6	7.6
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.7	0.0	0.8	1.5	28.0	29.1	3.6	7.6	7.6
Prop In Lane	0.56		0.29	1.00		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	109	0	0	134	0	145	40	1269	1293	89	1318	1381
V/C Ratio(X)	0.38	0.00	0.00	0.09	0.00	0.08	0.58	0.67	0.68	0.65	0.30	0.30
Avail Cap(c_a), veh/h	226	0	0	243	0	268	212	1269	1293	212	1318	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.09	0.09	0.98	0.98	0.98
Uniform Delay (d), s/veh	52.1	0.0	0.0	50.8	0.0	45.5	53.2	7.5	7.6	51.2	3.9	3.9
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.3	0.0	0.2	1.2	0.3	0.3	7.6	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.3	0.0	0.3	0.6	8.6	9.2	1.8	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.3	0.0	0.0	51.0	0.0	45.7	54.4	7.7	7.9	58.8	4.5	4.4
LnGrp LOS	D			D		D	D	A	A	E	A	A
Approach Vol, veh/h		41			24			1749			864	
Approach Delay, s/veh		54.3			48.4			8.4			8.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	86.6		11.2	9.0	89.8		11.2				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	13.5	64.5		13.5	13.5	64.5		13.5				
Max Q Clear Time (g_c+I1), s	5.6	31.1		5.4	3.5	9.6		2.8				
Green Ext Time (p_c), s	0.1	18.3		0.1	0.0	6.1		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	9.4	
HCM 7th LOS	A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Future Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h	12	0	12	23	12	105	12	779	0	0	384	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	0	0	4	4
Cap, veh/h	198	29	130	100	41	197	72	1124	0	0	1059	63
Arrive On Green	0.17	0.00	0.17	0.17	0.17	0.17	0.62	0.62	0.00	0.00	0.62	0.62
Sat Flow, veh/h	604	176	781	147	248	1184	9	1824	0	0	1719	103
Grp Volume(v), veh/h	24	0	0	140	0	0	791	0	0	0	0	407
Grp Sat Flow(s),veh/h/ln	1561	0	0	1579	0	0	1833	0	0	0	0	1822
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
Cycle Q Clear(g_c), s	0.7	0.0	0.0	4.4	0.0	0.0	16.0	0.0	0.0	0.0	0.0	6.1
Prop In Lane	0.50		0.50	0.16		0.75	0.02		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	358	0	0	339	0	0	1195	0	0	0	0	1123
V/C Ratio(X)	0.07	0.00	0.00	0.41	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.36
Avail Cap(c_a), veh/h	479	0	0	474	0	0	1195	0	0	0	0	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	0.0	21.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.6	0.0	0.0	5.1	0.0	0.0	0.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.5	0.0	0.0	21.8	0.0	0.0	10.0	0.0	0.0	0.0	0.0	6.1
LnGrp LOS	B			C			B					A
Approach Vol, veh/h		24			140			791			407	
Approach Delay, s/veh		19.5			21.8			10.0			6.1	
Approach LOS		B			C			B			A	

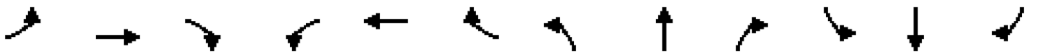
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	40.0	15.2	40.0	15.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	34.0	14.0	34.0	14.0
Max Q Clear Time (g_c+I1), s	18.0	2.7	8.1	6.4
Green Ext Time (p_c), s	5.4	0.0	2.7	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	10.2
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	40	640	320	70	290
Future Volume (veh/h)	230	40	640	320	70	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	268	47	744	372	81	337
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	334	398	868	735	113	1155
Arrive On Green	0.19	0.19	0.47	0.47	0.06	0.63
Sat Flow, veh/h	1753	1560	1841	1560	1753	1841
Grp Volume(v), veh/h	268	47	744	372	81	337
Grp Sat Flow(s),veh/h/ln	1753	1560	1841	1560	1753	1841
Q Serve(g_s), s	8.0	1.3	19.7	9.1	2.5	4.6
Cycle Q Clear(g_c), s	8.0	1.3	19.7	9.1	2.5	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	334	398	868	735	113	1155
V/C Ratio(X)	0.80	0.12	0.86	0.51	0.71	0.29
Avail Cap(c_a), veh/h	512	556	1008	854	288	1478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	15.7	12.9	10.1	25.1	4.7
Incr Delay (d2), s/veh	5.3	0.1	6.7	0.5	8.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.4	8.1	2.6	1.2	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.5	15.8	19.5	10.6	33.2	4.8
LnGrp LOS	C	B	B	B	C	A
Approach Vol, veh/h	315		1116			418
Approach Delay, s/veh	24.9		16.6			10.3
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.5	30.8				39.4	15.4
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	4.5	21.7				6.6	10.0
Green Ext Time (p_c), s	0.1	4.2				2.2	0.5

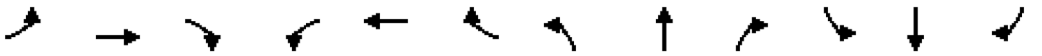
Intersection Summary	
HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Future Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	372	35	279				500	698	6	6	279	314
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				4	4	4	4	4	4
Cap, veh/h	525	53	422				474	919	8	83	519	446
Arrive On Green	0.30	0.30	0.30				0.11	0.50	0.50	0.29	0.29	0.29
Sat Flow, veh/h	1753	177	1410				1753	1822	16	11	1814	1560
Grp Volume(v), veh/h	372	0	314				500	0	704	285	0	314
Grp Sat Flow(s),veh/h/ln	1753	0	1587				1753	0	1838	1825	0	1560
Q Serve(g_s), s	8.7	0.0	7.9				5.0	0.0	14.1	0.0	0.0	8.3
Cycle Q Clear(g_c), s	8.7	0.0	7.9				5.0	0.0	14.1	6.0	0.0	8.3
Prop In Lane	1.00		0.89				1.00		0.01	0.02		1.00
Lane Grp Cap(c), veh/h	525	0	475				474	0	927	602	0	446
V/C Ratio(X)	0.71	0.00	0.66				1.05	0.00	0.76	0.47	0.00	0.70
Avail Cap(c_a), veh/h	1070	0	969				474	0	1723	1375	0	1122
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	14.0				14.9	0.0	9.1	13.8	0.0	14.6
Incr Delay (d2), s/veh	1.8	0.0	1.6				56.4	0.0	1.3	0.6	0.0	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	2.6				9.7	0.0	4.2	2.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.1	0.0	15.6				71.3	0.0	10.4	14.4	0.0	16.7
LnGrp LOS	B		B				F		B	B		B
Approach Vol, veh/h		686						1204			599	
Approach Delay, s/veh		15.9						35.7			15.6	
Approach LOS		B						D			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		28.1		17.7	10.0	18.1						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		43.0		28.0	5.0	33.0						
Max Q Clear Time (g_c+I1), s		16.1		10.7	7.0	10.3						
Green Ext Time (p_c), s		5.5		3.1	0.0	2.9						

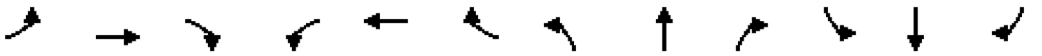
Intersection Summary												
HCM 7th Control Delay, s/veh			25.4									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Future Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	209	268	140	454	58	477	500	233	81	326	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	51	308	266	175	538	69	533	763	647	106	554	10
Arrive On Green	0.17	0.17	0.17	0.10	0.33	0.33	0.30	0.41	0.41	0.06	0.16	0.16
Sat Flow, veh/h	17	1820	1572	1767	1612	206	1767	1856	1572	1767	3541	65
Grp Volume(v), veh/h	215	0	268	140	0	512	477	500	233	81	162	170
Grp Sat Flow(s),veh/h/ln	1837	0	1572	1767	0	1818	1767	1856	1572	1767	1763	1844
Q Serve(g_s), s	0.0	0.0	13.0	5.9	0.0	20.0	19.8	16.7	7.9	3.5	6.6	6.6
Cycle Q Clear(g_c), s	8.4	0.0	13.0	5.9	0.0	20.0	19.8	16.7	7.9	3.5	6.6	6.6
Prop In Lane	0.03		1.00	1.00		0.11	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	359	0	266	175	0	606	533	763	647	106	276	288
V/C Ratio(X)	0.60	0.00	1.01	0.80	0.00	0.84	0.89	0.66	0.36	0.77	0.59	0.59
Avail Cap(c_a), veh/h	359	0	266	207	0	640	806	763	647	415	276	288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	31.9	33.8	0.0	23.7	25.6	18.2	15.6	35.5	30.1	30.1
Incr Delay (d2), s/veh	2.7	0.0	56.6	17.2	0.0	9.7	8.7	4.4	1.6	10.9	8.9	8.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	8.9	3.3	0.0	9.7	9.1	7.5	2.9	1.8	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.6	0.0	88.5	51.0	0.0	33.4	34.4	22.6	17.2	46.4	38.9	38.6
LnGrp LOS	C		F	D		C	C	C	B	D	D	D
Approach Vol, veh/h		483			652			1210			413	
Approach Delay, s/veh		63.6			37.2			26.2			40.3	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	36.5	12.6	18.0	29.1	17.0		30.6				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	30.0	9.0	13.0	35.0	12.0		27.0				
Max Q Clear Time (g_c+I1), s	5.5	18.7	7.9	15.0	21.8	8.6		22.0				
Green Ext Time (p_c), s	0.1	3.2	0.0	0.0	1.3	0.6		1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			37.5									
HCM 7th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Future Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	0	12	0	0	0	47	1186	0	0	698	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	185	0	48	0	57	0	67	1433	0	0	1075	89
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.04	0.77	0.00	0.00	0.64	0.64
Sat Flow, veh/h	1406	0	1572	0	1856	0	1767	1856	0	0	1690	140
Grp Volume(v), veh/h	23	0	12	0	0	0	47	1186	0	0	0	756
Grp Sat Flow(s),veh/h/ln	1406	0	1572	0	1856	0	1767	1856	0	0	0	1830
Q Serve(g_s), s	0.8	0.0	0.4	0.0	0.0	0.0	1.3	20.5	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s	0.8	0.0	0.4	0.0	0.0	0.0	1.3	20.5	0.0	0.0	0.0	13.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h	185	0	48	0	57	0	67	1433	0	0	0	1164
V/C Ratio(X)	0.12	0.00	0.25	0.00	0.00	0.00	0.70	0.83	0.00	0.00	0.00	0.65
Avail Cap(c_a), veh/h	419	0	310	0	365	0	348	2557	0	0	0	1982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	24.0	0.0	0.0	0.0	24.1	3.6	0.0	0.0	0.0	5.7
Incr Delay (d2), s/veh	0.3	0.0	2.6	0.0	0.0	0.0	12.2	1.3	0.0	0.0	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.0	0.0	0.0	0.7	1.6	0.0	0.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.6	0.0	26.7	0.0	0.0	0.0	36.3	4.9	0.0	0.0	0.0	6.4
LnGrp LOS	C		C				D	A				A
Approach Vol, veh/h		35			0			1233			756	
Approach Delay, s/veh		25.3			0.0			6.1			6.4	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.2		6.6	6.9	37.3		6.6				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		70.0		10.0	10.0	55.0		10.0				
Max Q Clear Time (g_c+I1), s		22.5		2.8	3.3	15.0		0.0				
Green Ext Time (p_c), s		16.8		0.0	0.0	6.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	6.5
HCM 7th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Future Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	254	0	99	0	0	1	132	684	0	0	419	243
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	392	0	331	0	0	331	146	639	0	0	670	389
Arrive On Green	0.21	0.00	0.21	0.00	0.00	0.21	0.61	0.61	0.00	0.00	0.61	0.61
Sat Flow, veh/h	1405	0	1572	0	0	1572	148	1051	0	0	1102	639
Grp Volume(v), veh/h	254	0	99	0	0	1	816	0	0	0	0	662
Grp Sat Flow(s),veh/h/ln	1405	0	1572	0	0	1573	1198	0	0	0	0	1741
Q Serve(g_s), s	13.0	0.0	4.0	0.0	0.0	0.0	27.5	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	13.1	0.0	4.0	0.0	0.0	0.0	45.5	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		1.00	0.00		1.00	0.16		0.00	0.00		0.37
Lane Grp Cap(c), veh/h	392	0	331	0	0	331	785	0	0	0	0	1059
V/C Ratio(X)	0.65	0.00	0.30	0.00	0.00	0.00	1.04	0.00	0.00	0.00	0.00	0.62
Avail Cap(c_a), veh/h	490	0	442	0	0	473	785	0	0	0	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	24.8	0.0	0.0	23.3	18.4	0.0	0.0	0.0	0.0	9.2
Incr Delay (d2), s/veh	2.0	0.0	0.5	0.0	0.0	0.0	42.7	0.0	0.0	0.0	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	1.5	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.5	0.0	25.3	0.0	0.0	23.3	61.0	0.0	0.0	0.0	0.0	10.4
LnGrp LOS	C		C			C	F					B
Approach Vol, veh/h		353			1			816			662	
Approach Delay, s/veh		29.1			23.3			61.0			10.4	
Approach LOS		C			C			E			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	53.0	21.8	53.0	21.8
Change Period (Y+Rc), s	7.5	6.0	7.5	* 6
Max Green Setting (Gmax), s	45.5	21.0	45.5	* 23
Max Q Clear Time (g_c+I1), s	47.5	15.1	20.0	2.0
Green Ext Time (p_c), s	0.0	0.7	5.2	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	36.5
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Future Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	6	0	6	0	0	0	11	755	0	0	360	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	141	0	11	0	29	0	93	1316	0	0	1326	0
Arrive On Green	0.02	0.00	0.02	0.00	0.00	0.00	0.72	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	736	0	736	0	1841	0	7	1828	0	0	1841	0
Grp Volume(v), veh/h	12	0	0	0	0	0	766	0	0	0	360	0
Grp Sat Flow(s),veh/h/ln	1473	0	0	0	1841	0	1835	0	0	0	1841	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	2.8	0.0
Prop In Lane	0.50		0.50	0.00		0.00	0.01		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	153	0	0	0	29	0	1409	0	0	0	1326	0
V/C Ratio(X)	0.08	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.27	0.00
Avail Cap(c_a), veh/h	519	0	0	0	530	0	1409	0	0	0	1326	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	20.3	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.6	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.1	0.0
LnGrp LOS	C						A				A	
Approach Vol, veh/h		12			0			766			360	
Approach Delay, s/veh		20.6			0.0			3.2			2.1	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.6		36.0		5.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		* 5				
Max Green Setting (Gmax), s		30.0		11.0		30.0		* 12				
Max Q Clear Time (g_c+I1), s		10.3		2.3		4.8		0.0				
Green Ext Time (p_c), s		5.6		0.0		2.2		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	3.1
HCM 7th LOS	A

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	320	50	170	740	40	130
Future Vol, veh/h	320	50	170	740	40	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	360	56	191	833	45	146

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	417	0	1605	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	1216	-
Critical Hdwy	-	-	4.15	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3	3
Pot Cap-1 Maneuver	-	-	1126	-	150	735
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1126	-	102	735
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	207	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	1.65	36.03
HCM LOS			E

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	300	336	-	-	-
HCM Lane V/C Ratio	0.639	0.17	-	-	-
HCM Control Delay (s/veh)	36	8.8	0	-	-
HCM Lane LOS	E	A	A	-	-
HCM 95th %tile Q(veh)	4.1	0.6	-	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	30	120	100	350	760	30
Future Vol, veh/h	30	120	100	350	760	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	35	140	116	407	884	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1541	901	919	0	-	0
Stage 1	901	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Critical Hdwy	6	6	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	2.236	-	-	-
Pot Cap-1 Maneuver	163	380	734	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	589	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	130	380	734	-	-	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s/v	38.5	2.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	274	400	-
HCM Lane V/C Ratio	-	-	0.636	0.158	-
HCM Control Delay (s/veh)	-	-	38.5	10.8	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	4	0.6	-

Intersection	
Int Delay, s/veh	40.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	150	910	150	80	520
Future Vol, veh/h	80	150	910	150	80	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	89	167	1014	167	89	580

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1856	1098	0	0	1181	0
Stage 1	1098	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.236	-
Pot Cap-1 Maneuver	107	294	-	-	584	-
Stage 1	349	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	91	294	-	-	584	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	$326.35	0	1.64
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	165	584	-
HCM Lane V/C Ratio	-	-	1.553	0.153	-
HCM Control Delay (s/veh)	-	-	$ 326.3	12.3	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	17	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

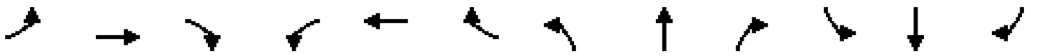
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Future Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	11	0	6	11	6	114	11	1047	11	57	592	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1790	1799	603	1781	1804	1053	615	0	0	1059	0	0
Stage 1	717	717	-	1076	1076	-	-	-	-	-	-	-
Stage 2	1073	1081	-	706	729	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.5	5.54	-	5.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.54	-	5.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	117	116	559	118	115	312	955	-	-	650	-	-
Stage 1	533	529	-	351	347	-	-	-	-	-	-	-
Stage 2	352	345	-	540	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	59	97	559	99	97	312	955	-	-	650	-	-
Mov Cap-2 Maneuver	59	97	-	99	97	-	-	-	-	-	-	-
Stage 1	462	458	-	341	337	-	-	-	-	-	-	-
Stage 2	214	335	-	463	452	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	58.08	35.99	0.09	0.94
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	19	-	-	85	243	151	-	-
HCM Lane V/C Ratio	0.012	-	-	0.202	0.54	0.088	-	-
HCM Control Delay (s/veh)	8.8	0	-	58.1	36	11.1	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	2.9	0.3	-	-

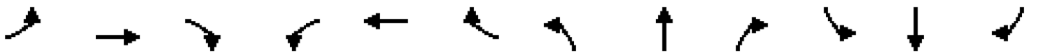
Part 5: 2035 No Build Conditions: Weekday PM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Future Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	11	312	323	22	89	256	479	89	45	1170	123
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	59	707	361	121	491	245	1325	245	58	1298	136
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.07	0.44	0.44	0.03	0.40	0.40
Sat Flow, veh/h	1027	157	1585	1057	324	1311	3456	2994	553	1781	3245	341
Grp Volume(v), veh/h	89	0	312	323	0	111	256	283	285	45	640	653
Grp Sat Flow(s),veh/h/ln	1184	0	1585	1057	0	1634	1728	1777	1771	1781	1777	1809
Q Serve(g_s), s	5.3	0.0	16.3	34.2	0.0	5.5	8.5	12.7	12.8	3.0	40.5	40.7
Cycle Q Clear(g_c), s	10.8	0.0	16.3	45.0	0.0	5.5	8.5	12.7	12.8	3.0	40.5	40.7
Prop In Lane	0.88		1.00	1.00		0.80	1.00		0.31	1.00		0.19
Lane Grp Cap(c), veh/h	500	0	707	361	0	613	245	786	784	58	711	724
V/C Ratio(X)	0.18	0.00	0.44	0.89	0.00	0.18	1.05	0.36	0.36	0.78	0.90	0.90
Avail Cap(c_a), veh/h	500	0	707	361	0	613	245	786	784	104	711	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	22.9	44.0	0.0	25.1	55.8	22.2	22.2	57.6	33.7	33.8
Incr Delay (d2), s/veh	0.2	0.0	0.4	23.5	0.0	0.1	69.2	1.2	1.3	19.6	16.6	16.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	6.1	12.1	0.0	2.2	6.1	5.6	5.6	1.7	20.4	20.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.5	0.0	23.4	67.6	0.0	25.3	124.9	23.4	23.5	77.2	50.4	50.6
LnGrp LOS	C		C	E		C	F	C	C	E	D	D
Approach Vol, veh/h		401			434			824			1338	
Approach Delay, s/veh		24.5			56.7			55.0			51.4	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	58.1		51.0	16.0	53.0		51.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	7.0	50.0		45.0	8.5	48.0		45.0				
Max Q Clear Time (g_c+I1), s	5.0	14.8		18.3	10.5	42.7		47.0				
Green Ext Time (p_c), s	0.0	3.9		1.7	0.0	3.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			49.5									
HCM 7th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Future Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	0	0	22	6	6	474	717	22	11	1357	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	0		86	15	11	547	2787	85	23	2296	
Arrive On Green	0.04	0.00	0.00	0.04	0.04	0.04	0.16	0.79	0.79	0.03	1.00	0.00
Sat Flow, veh/h	2805	0	1585	891	375	271	3456	3520	108	1781	3554	1585
Grp Volume(v), veh/h	85	0	0	34	0	0	474	362	377	11	1357	0
Grp Sat Flow(s),veh/h/ln	1402	0	1585	1537	0	0	1728	1777	1851	1781	1777	1585
Q Serve(g_s), s	0.3	0.0	0.0	2.1	0.0	0.0	16.1	6.4	6.4	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	2.6	0.0	0.0	16.1	6.4	6.4	0.7	0.0	0.0
Prop In Lane	1.00		1.00	0.65		0.18	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	252	0		113	0	0	547	1407	1466	23	2296	
V/C Ratio(X)	0.34	0.00		0.30	0.00	0.00	0.87	0.26	0.26	0.48	0.59	
Avail Cap(c_a), veh/h	545	0		271	0	0	691	1407	1466	134	2296	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	0.48	0.48	0.00
Uniform Delay (d), s/veh	56.5	0.0	0.0	56.4	0.0	0.0	49.2	3.3	3.3	58.1	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.5	0.0	0.0	8.7	0.4	0.4	7.4	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.1	0.0	0.0	7.6	2.0	2.1	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.3	0.0	0.0	57.8	0.0	0.0	58.0	3.7	3.7	65.5	0.5	0.0
LnGrp LOS	E			E			E	A	A	E	A	
Approach Vol, veh/h		85			34			1213			1368	
Approach Delay, s/veh		57.3			57.8			24.9			1.1	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	100.0		12.4	25.0	82.5		12.4				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	9.0	75.0		17.5	24.0	60.0		17.5				
Max Q Clear Time (g_c+I1), s	2.7	8.4		4.9	18.1	2.0		4.6				
Green Ext Time (p_c), s	0.0	5.4		0.2	1.0	15.7		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.3	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Future Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1578	0	0	994	703	195	195	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2952		0	2952	1317	264	264	
Arrive On Green			0.00	0.82	0.00	0.00	1.00	1.00	0.08	0.08	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1578	0	0	994	703	195	195	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	16.6	0.0	0.0	0.0	0.0	6.6	6.6	0.0
Cycle Q Clear(g_c), s			0.0	16.6	0.0	0.0	0.0	0.0	6.6	6.6	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2952		0	2952	1317	264	264	
V/C Ratio(X)			0.00	0.53		0.00	0.34	0.53	0.74	0.74	
Avail Cap(c_a), veh/h			0	2952		0	2952	1317	668	668	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.80	0.00	0.00	0.81	0.81	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	3.3	0.0	0.0	0.0	0.0	54.3	54.3	0.0
Incr Delay (d2), s/veh			0.0	0.6	0.0	0.0	0.3	1.3	4.0	4.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	4.4	0.0	0.0	0.1	0.5	3.0	3.0	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.9	0.0	0.0	0.3	1.3	58.3	58.3	0.0
LnGrp LOS				A			A	A	E	E	
Approach Vol, veh/h				1578			1697		195	195	
Approach Delay, s/veh				3.9			0.7		58.3	58.3	
Approach LOS				A			A		E	E	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	103.9		16.1		103.9						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	85.0		23.0		85.0						
Max Q Clear Time (g_c+I1), s	2.0		8.6		18.6						
Green Ext Time (p_c), s	15.9		0.5		21.3						

Intersection Summary	
HCM 7th Control Delay, s/veh	5.4
HCM 7th LOS	A

Notes

Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Future Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	408	1456	375	121	982	66	298	99	99	44	110	375
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1820	466	146	1919	129	466	270	270	141	335	498
Arrive On Green	0.14	0.45	0.45	0.08	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	3456	4050	1037	1781	4887	328	1767	858	858	328	1066	1585
Grp Volume(v), veh/h	408	1222	609	121	683	365	298	0	198	154	0	375
Grp Sat Flow(s),veh/h/ln	1728	1702	1684	1781	1702	1811	883	0	1716	1394	0	1585
Q Serve(g_s), s	13.8	37.0	37.4	8.0	18.3	18.4	19.6	0.0	10.7	3.4	0.0	25.5
Cycle Q Clear(g_c), s	13.8	37.0	37.4	8.0	18.3	18.4	33.8	0.0	10.7	14.2	0.0	25.5
Prop In Lane	1.00		0.62	1.00		0.18	1.00		0.50	0.29		1.00
Lane Grp Cap(c), veh/h	481	1530	757	146	1336	711	466	0	539	477	0	498
V/C Ratio(X)	0.85	0.80	0.80	0.83	0.51	0.51	0.64	0.00	0.37	0.32	0.00	0.75
Avail Cap(c_a), veh/h	648	1530	757	156	1336	711	559	0	629	561	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.4	28.4	28.5	54.2	27.7	27.7	46.7	0.0	31.9	32.4	0.0	37.0
Incr Delay (d2), s/veh	6.7	3.7	7.5	28.0	1.4	2.6	1.8	0.0	0.4	0.4	0.0	4.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	15.5	16.3	4.7	7.7	8.4	4.4	0.0	4.5	3.7	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.1	32.1	36.0	82.2	29.1	30.4	48.5	0.0	32.3	32.8	0.0	41.7
LnGrp LOS	E	C	D	F	C	C	D		C	C		D
Approach Vol, veh/h		2239			1169			496			529	
Approach Delay, s/veh		37.7			35.0			42.0			39.1	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.2	52.1		43.7	17.4	58.9		43.7				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	22.5	35.0		44.0	10.5	47.0		44.0				
Max Q Clear Time (g_c+I1), s	15.8	20.4		35.8	10.0	39.4		27.5				
Green Ext Time (p_c), s	0.9	6.1		2.0	0.0	6.1		2.1				

Intersection Summary			
HCM 7th Control Delay, s/veh		37.6	
HCM 7th LOS		D	

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Future Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	394	1261	0	0	879	158	0	0	0	120	0	391
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	468	2696	0	0	2007	895	0	280	0	327	0	475
Arrive On Green	0.14	0.76	0.00	0.00	0.56	0.56	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	394	1261	0	0	879	158	0	0	0	120	0	391
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	13.4	15.9	0.0	0.0	17.2	5.8	0.0	0.0	0.0	7.4	0.0	14.4
Cycle Q Clear(g_c), s	13.4	15.9	0.0	0.0	17.2	5.8	0.0	0.0	0.0	7.4	0.0	14.4
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	468	2696	0	0	2007	895	0	280	0	327	0	475
V/C Ratio(X)	0.84	0.47	0.00	0.00	0.44	0.18	0.00	0.00	0.00	0.37	0.00	0.82
Avail Cap(c_a), veh/h	662	2696	0	0	2007	895	0	452	0	490	0	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.86	0.86	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	5.4	0.0	0.0	15.1	12.6	0.0	0.0	0.0	46.5	0.0	49.5
Incr Delay (d2), s/veh	6.8	0.6	0.0	0.0	0.6	0.4	0.0	0.0	0.0	0.7	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	5.3	0.0	0.0	7.0	2.1	0.0	0.0	0.0	3.3	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.4	6.0	0.0	0.0	15.7	13.0	0.0	0.0	0.0	47.2	0.0	53.4
LnGrp LOS	E	A			B	B				D		D
Approach Vol, veh/h		1655			1037			0			511	
Approach Delay, s/veh		18.3			15.3			0.0			51.9	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	23.2	72.8		24.0		96.0		24.0				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	23.0	50.0		29.0		80.0		29.0				
Max Q Clear Time (g_c+I1), s	15.4	19.2		0.0		17.9		16.4				
Green Ext Time (p_c), s	0.9	7.9		0.0		13.9		1.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			22.7									
HCM 7th LOS			C									

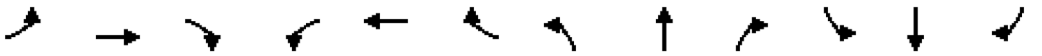
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Future Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	34	1	23	158	1	101	23	935	146	11	1464	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	13	33	264	1	353	39	1899	296	74	2257	52
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.04	1.00	1.00	0.04	0.64	0.64
Sat Flow, veh/h	198	73	178	1120	7	1572	1767	3055	477	1767	3522	82
Grp Volume(v), veh/h	58	0	0	159	0	101	23	539	542	11	732	766
Grp Sat Flow(s),veh/h/ln	450	0	0	1127	0	1572	1767	1763	1770	1767	1763	1841
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	6.4	1.5	0.0	0.0	0.7	30.6	30.7
Cycle Q Clear(g_c), s	19.7	0.0	0.0	16.6	0.0	6.4	1.5	0.0	0.0	0.7	30.6	30.7
Prop In Lane	0.59		0.40	0.99		1.00	1.00		0.27	1.00		0.04
Lane Grp Cap(c), veh/h	130	0	0	266	0	353	39	1096	1100	74	1130	1180
V/C Ratio(X)	0.45	0.00	0.00	0.60	0.00	0.29	0.58	0.49	0.49	0.15	0.65	0.65
Avail Cap(c_a), veh/h	287	0	0	422	0	531	96	1096	1100	96	1130	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.09	0.09	0.84	0.84	0.84
Uniform Delay (d), s/veh	50.2	0.0	0.0	46.9	0.0	38.6	56.8	0.0	0.0	55.4	13.2	13.3
Incr Delay (d2), s/veh	2.4	0.0	0.0	2.2	0.0	0.4	1.2	0.1	0.1	0.8	2.4	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	4.7	0.0	2.5	0.7	0.0	0.0	0.3	12.1	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.6	0.0	0.0	49.0	0.0	39.0	58.0	0.1	0.1	56.2	15.7	15.6
LnGrp LOS	D			D		D	E	A	A	E	B	B
Approach Vol, veh/h		58			260			1104			1509	
Approach Delay, s/veh		52.6			45.1			1.3			15.9	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	80.1		28.4	9.2	82.4		28.4				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	6.5	59.5		35.5	6.5	59.5		35.5				
Max Q Clear Time (g_c+I1), s	2.7	2.0		21.7	3.5	32.7		18.6				
Green Ext Time (p_c), s	0.0	9.6		0.2	0.0	13.0		1.1				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.7	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	11	0	11	22	11	56	11	535	0	0	780	56
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	228	16	79	171	23	97	118	1101	0	0	1031	74
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.60	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	656	161	818	348	238	995	10	1841	0	0	1724	124
Grp Volume(v), veh/h	22	0	0	89	0	0	546	0	0	0	0	836
Grp Sat Flow(s),veh/h/ln	1635	0	0	1582	0	0	1851	0	0	0	0	1848
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.7	0.0	0.0	5.4	0.0	0.0	0.0	0.0	10.9
Prop In Lane	0.50		0.50	0.25		0.63	0.02		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	323	0	0	290	0	0	1219	0	0	0	0	1105
V/C Ratio(X)	0.07	0.00	0.00	0.31	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.76
Avail Cap(c_a), veh/h	846	0	0	855	0	0	2067	0	0	0	0	1974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	14.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.6	0.0	0.0	14.7	0.0	0.0	4.0	0.0	0.0	0.0	0.0	5.9
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		22			89			546			836	
Approach Delay, s/veh		13.6			14.7			4.0			5.9	
Approach LOS		B			B			A			A	

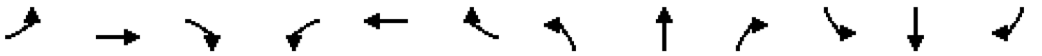
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.6		8.2		24.6		8.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		15.0		35.0		15.0				
Max Q Clear Time (g_c+I1), s		7.4		2.4		12.9		3.7				
Green Ext Time (p_c), s		4.0		0.0		6.7		0.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			5.9									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	120	370	310	170	560
Future Volume (veh/h)	290	120	370	310	170	560
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	134	412	346	189	624
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	409	364	594	868	240	1045
Arrive On Green	0.23	0.23	0.32	0.32	0.13	0.56
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	323	134	412	346	189	624
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	8.1	3.4	9.1	6.0	4.8	10.4
Cycle Q Clear(g_c), s	8.1	3.4	9.1	6.0	4.8	10.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	409	364	594	868	240	1045
V/C Ratio(X)	0.79	0.37	0.69	0.40	0.79	0.60
Avail Cap(c_a), veh/h	604	537	1188	1371	340	1743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	15.3	14.1	6.2	19.8	6.9
Incr Delay (d2), s/veh	4.3	0.6	1.5	0.3	7.8	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.1	3.4	2.8	2.3	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.4	15.9	15.6	6.5	27.5	7.5
LnGrp LOS	C	B	B	A	C	A
Approach Vol, veh/h	457		758			813
Approach Delay, s/veh	19.8		11.4			12.1
Approach LOS	B		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.4	20.0				31.4	15.8
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	6.8	11.1				12.4	10.1
Green Ext Time (p_c), s	0.1	3.7				4.8	0.8

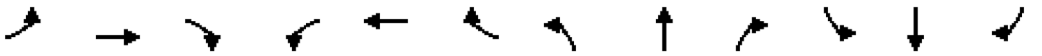
Intersection Summary							
HCM 7th Control Delay, s/veh			13.6				
HCM 7th LOS			B				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Future Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	364	132	276				331	419	11	22	485	353
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	446	147	307				451	1117	29	63	776	684
Arrive On Green	0.27	0.27	0.27				0.12	0.62	0.62	0.43	0.43	0.43
Sat Flow, veh/h	1639	539	1128				1781	1814	48	36	1799	1585
Grp Volume(v), veh/h	364	0	408				331	0	430	507	0	353
Grp Sat Flow(s),veh/h/ln	1639	0	1667				1781	0	1862	1836	0	1585
Q Serve(g_s), s	16.6	0.0	18.9				7.7	0.0	9.2	0.0	0.0	13.0
Cycle Q Clear(g_c), s	16.6	0.0	18.9				7.7	0.0	9.2	16.9	0.0	13.0
Prop In Lane	1.00		0.68				1.00		0.03	0.04		1.00
Lane Grp Cap(c), veh/h	446	0	454				451	0	1146	839	0	684
V/C Ratio(X)	0.82	0.00	0.90				0.73	0.00	0.38	0.60	0.00	0.52
Avail Cap(c_a), veh/h	471	0	479				457	0	1146	839	0	684
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	0.71	0.00	0.71
Uniform Delay (d), s/veh	27.3	0.0	28.1				13.2	0.0	7.7	17.7	0.0	16.6
Incr Delay (d2), s/veh	10.3	0.0	19.1				6.0	0.0	0.9	2.3	0.0	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	9.6				3.4	0.0	3.5	7.3	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.5	0.0	47.2				19.2	0.0	8.6	20.0	0.0	18.6
LnGrp LOS	D		D				B		A	C		B
Approach Vol, veh/h		772						761			860	
Approach Delay, s/veh		42.7						13.2			19.5	
Approach LOS		D						B			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		54.2		25.8	14.7	39.5						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		48.0		23.0	10.0	33.0						
Max Q Clear Time (g_c+I1), s		11.2		20.9	9.7	18.9						
Green Ext Time (p_c), s		3.0		0.9	0.0	4.0						

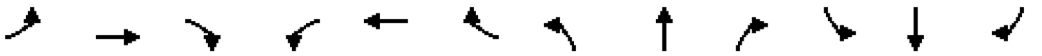
Intersection Summary												
HCM 7th Control Delay, s/veh			25.0									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Future Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	331	397	232	397	55	298	364	199	221	441	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	560	475	363	732	101	324	378	320	264	551	14
Arrive On Green	0.00	0.30	0.30	0.09	0.46	0.46	0.18	0.20	0.20	0.15	0.16	0.16
Sat Flow, veh/h	0	1870	1585	1781	1608	223	1781	1870	1585	1781	3543	88
Grp Volume(v), veh/h	0	331	397	232	0	452	298	364	199	221	221	231
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1781	0	1830	1781	1870	1585	1781	1777	1854
Q Serve(g_s), s	0.0	11.6	18.0	6.7	0.0	13.8	12.7	14.9	8.8	9.3	9.2	9.3
Cycle Q Clear(g_c), s	0.0	11.6	18.0	6.7	0.0	13.8	12.7	14.9	8.8	9.3	9.2	9.3
Prop In Lane	0.00		1.00	1.00		0.12	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	0	560	475	363	0	833	324	378	320	264	276	288
V/C Ratio(X)	0.00	0.59	0.84	0.64	0.00	0.54	0.92	0.96	0.62	0.84	0.80	0.80
Avail Cap(c_a), veh/h	0	825	699	363	0	1093	324	378	320	347	323	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	23.0	25.2	16.9	0.0	15.2	31.0	30.5	28.1	31.9	31.4	31.4
Incr Delay (d2), s/veh	0.0	1.0	5.8	3.7	0.0	0.6	30.5	36.6	3.7	12.9	11.6	11.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	7.2	2.9	0.0	5.4	8.0	10.3	3.6	4.8	4.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	24.0	31.0	20.6	0.0	15.7	61.5	67.1	31.7	44.8	43.0	42.8
LnGrp LOS		C	C	C		B	E	E	C	D	D	D
Approach Vol, veh/h		728			684			861			673	
Approach Delay, s/veh		27.8			17.4			57.0			43.5	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	16.4	20.6	12.0	28.1	20.0	17.0		40.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	14.0	7.0	34.0	14.0	14.0		46.0				
Max Q Clear Time (g_c+I1), s	11.3	16.9	8.7	20.0	14.7	11.3		15.8				
Green Ext Time (p_c), s	0.2	0.0	0.0	3.0	0.0	0.7		3.1				

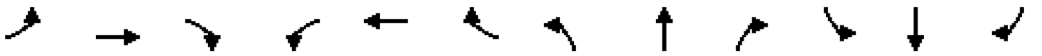
Intersection Summary	
HCM 7th Control Delay, s/veh	37.5
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Future Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	0	44	0	0	0	44	794	0	0	982	66
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	0	187	0	159	0	59	1433	0	0	1141	77
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.03	0.77	0.00	0.00	0.66	0.66
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1733	116
Grp Volume(v), veh/h	88	0	44	0	0	0	44	794	0	0	0	1048
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	4.1	0.0	1.7	0.0	0.0	0.0	1.6	11.6	0.0	0.0	0.0	30.0
Cycle Q Clear(g_c), s	4.1	0.0	1.7	0.0	0.0	0.0	1.6	11.6	0.0	0.0	0.0	30.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	228	0	187	0	159	0	59	1433	0	0	0	1218
V/C Ratio(X)	0.39	0.00	0.23	0.00	0.00	0.00	0.74	0.55	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h	318	0	289	0	278	0	186	2367	0	0	0	2010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	26.9	0.0	0.0	0.0	32.2	3.2	0.0	0.0	0.0	9.0
Incr Delay (d2), s/veh	1.1	0.0	0.6	0.0	0.0	0.0	16.4	0.3	0.0	0.0	0.0	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.6	0.0	0.0	0.0	1.0	2.2	0.0	0.0	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.1	0.0	27.5	0.0	0.0	0.0	48.6	3.5	0.0	0.0	0.0	11.2
LnGrp LOS	C		C				D	A				B
Approach Vol, veh/h		132			0			838			1048	
Approach Delay, s/veh		29.9			0.0			5.9			11.2	
Approach LOS		C						A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		56.5		10.7	7.2	49.2		10.7				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		85.0		10.0	7.0	73.0		10.0				
Max Q Clear Time (g_c+I1), s		13.6		6.1	3.6	32.0		0.0				
Green Ext Time (p_c), s		7.5		0.2	0.0	12.2		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.2									
HCM 7th LOS			B									



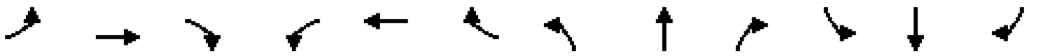
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Future Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	1	102	0	0	0	68	467	1	0	763	307
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	3	281	0	334	0	80	526	1	0	880	354
Arrive On Green	0.18	0.18	0.18	0.00	0.00	0.00	0.69	0.69	0.69	0.00	0.69	0.69
Sat Flow, veh/h	1781	15	1572	0	1870	0	60	758	2	0	1268	510
Grp Volume(v), veh/h	285	0	103	0	0	0	536	0	0	0	0	1070
Grp Sat Flow(s),veh/h/ln	1781	0	1587	0	1870	0	820	0	0	0	0	1779
Q Serve(g_s), s	16.6	0.0	6.1	0.0	0.0	0.0	21.6	0.0	0.0	0.0	0.0	49.1
Cycle Q Clear(g_c), s	16.6	0.0	6.1	0.0	0.0	0.0	70.7	0.0	0.0	0.0	0.0	49.1
Prop In Lane	1.00		0.99	0.00		0.00	0.13		0.00	0.00		0.29
Lane Grp Cap(c), veh/h	386	0	284	0	334	0	607	0	0	0	0	1235
V/C Ratio(X)	0.74	0.00	0.36	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.87
Avail Cap(c_a), veh/h	420	0	314	0	378	0	630	0	0	0	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	38.3	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0	12.5
Incr Delay (d2), s/veh	6.2	0.0	0.8	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	2.4	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.9	0.0	39.1	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0	19.0
LnGrp LOS	D		D				C					B
Approach Vol, veh/h		388			0			536			1070	
Approach Delay, s/veh		46.3			0.0			30.1			19.0	
Approach LOS		D						C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.3		25.0		81.3		25.0				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		75.5		21.0		75.5		* 22				
Max Q Clear Time (g_c+I1), s		72.7		18.6		51.1		0.0				
Green Ext Time (p_c), s		1.1		0.4		10.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Future Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	6	0	6	1	0	0	6	524	0	0	758	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	151	0	20	215	0	0	92	1335	0	0	1343	0
Arrive On Green	0.03	0.00	0.03	0.03	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	740	0	740	1495	0	0	4	1829	0	0	1841	0
Grp Volume(v), veh/h	12	0	0	1	0	0	530	0	0	0	758	0
Grp Sat Flow(s),veh/h/ln	1480	0	0	1495	0	0	1834	0	0	0	1841	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	7.8	0.0
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	171	0	0	215	0	0	1427	0	0	0	1343	0
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.56	0.00
Avail Cap(c_a), veh/h	562	0	0	583	0	0	1427	0	0	0	1343	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	19.6	0.0	0.0	19.5	0.0	0.0	2.1	0.0	0.0	0.0	2.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.5	0.0	0.0	2.3	0.0	0.0	0.0	3.1	0.0
LnGrp LOS	B			B			A				A	
Approach Vol, veh/h		12			1			530			758	
Approach Delay, s/veh		19.8			19.5			2.3			3.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.1		36.0		5.1				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		6.5		2.3		9.8		2.0				
Green Ext Time (p_c), s		3.6		0.0		5.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh		2.9										
HCM 7th LOS		A										

Intersection	
Int Delay, s/veh	1.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	800	20	55	620	10	40
Future Vol, veh/h	800	20	55	620	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	920	23	63	713	12	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	943	0	1772	932
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	840	-
Critical Hdwy	-	-	4.12	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	727	-	120	365
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	727	-	103	365
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	403	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.85	24.51
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	241	147	-	-	-
HCM Lane V/C Ratio	0.238	0.087	-	-	-
HCM Control Delay (s/veh)	24.5	10.4	0	-	-
HCM Lane LOS	C	B	A	-	-
HCM 95th %tile Q(veh)	0.9	0.3	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	100	740	550	20	30	100
Future Vol, veh/h	100	740	550	20	30	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	842	626	23	34	114

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	649	0	-	0	1707	637
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	1070	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	937	-	-	-	131	535
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	362	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	937	-	-	-	101	535
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	362	-

Approach	SE	NW	SW
HCM Control Delay, s/v	1.12	0	33.75
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	214	-	268
HCM Lane V/C Ratio	-	-	0.121	-	0.552
HCM Control Delay (s/veh)	-	-	9.4	0	33.8
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.4	-	3.1

Intersection	
Int Delay, s/veh	37.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	120	660	140	90	860
Future Vol, veh/h	90	120	660	140	90	860
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	134	736	156	100	959

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1973	814	0	0	892	0
Stage 1	814	-	-	-	-	-
Stage 2	1159	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.218	-
Pot Cap-1 Maneuver	~ 91	426	-	-	760	-
Stage 1	485	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 79	426	-	-	760	-
Mov Cap-2 Maneuver	~ 79	-	-	-	-	-
Stage 1	485	-	-	-	-	-
Stage 2	284	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 345.1	0	0.99
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	148	760	-
HCM Lane V/C Ratio	-	-	1.58	0.132	-
HCM Control Delay (s/veh)	-	-	$ 345.1	10.5	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	16.2	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	19.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Future Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	24	24	6	6	76	24	811	12	59	1070	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2072	2081	1094	2064	2099	817	1117	0	0	823	0	0
Stage 1	1211	1211	-	864	864	-	-	-	-	-	-	-
Stage 2	861	870	-	1199	1235	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	80	79	296	81	77	424	625	-	-	807	-	-
Stage 1	300	298	-	450	447	-	-	-	-	-	-	-
Stage 2	451	444	-	304	289	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 45	59	296	37	58	424	625	-	-	807	-	-
Mov Cap-2 Maneuver	~ 45	59	-	37	58	-	-	-	-	-	-	-
Stage 1	241	240	-	418	416	-	-	-	-	-	-	-
Stage 2	339	413	-	203	233	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $/+	411.81	36.43	0.31	0.49
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	50	-	-	62	200	89	-	-
HCM Lane V/C Ratio	0.038	-	-	1.521	0.441	0.073	-	-
HCM Control Delay (s/veh)	11	0	-	$ 411.8	36.4	9.8	0	-
HCM Lane LOS	B	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	8.3	2.1	0.2	-	-

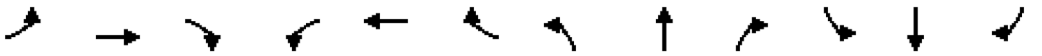
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Part 6: 2035 No Build Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Future Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	11	212	78	6	33	312	412	56	89	892	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	36	409	172	36	199	392	1935	261	107	1945	72
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.62	0.62	0.06	0.56	0.56
Sat Flow, veh/h	1023	252	1585	1158	250	1373	3456	3146	425	1781	3495	129
Grp Volume(v), veh/h	67	0	212	78	0	39	312	232	236	89	454	471
Grp Sat Flow(s),veh/h/ln	1274	0	1585	1158	0	1623	1728	1777	1794	1781	1777	1847
Q Serve(g_s), s	3.8	0.0	11.5	6.6	0.0	2.1	8.8	5.8	5.8	4.9	15.2	15.2
Cycle Q Clear(g_c), s	5.9	0.0	11.5	12.5	0.0	2.1	8.8	5.8	5.8	4.9	15.2	15.2
Prop In Lane	0.84		1.00	1.00		0.85	1.00		0.24	1.00		0.07
Lane Grp Cap(c), veh/h	251	0	409	172	0	235	392	1093	1104	107	989	1028
V/C Ratio(X)	0.27	0.00	0.52	0.45	0.00	0.17	0.80	0.21	0.21	0.83	0.46	0.46
Avail Cap(c_a), veh/h	258	0	418	178	0	243	570	1093	1104	107	989	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	31.8	44.8	0.0	37.5	43.2	8.5	8.5	46.5	13.2	13.2
Incr Delay (d2), s/veh	0.6	0.0	1.1	1.9	0.0	0.3	4.7	0.4	0.4	40.3	1.5	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.5	2.0	0.0	0.9	4.0	2.2	2.3	3.4	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	32.8	46.6	0.0	37.8	47.9	8.9	9.0	86.8	14.7	14.7
LnGrp LOS	D		C	D		D	D	A	A	F	B	B
Approach Vol, veh/h		279			117			780			1014	
Approach Delay, s/veh		34.6			43.7			24.5			21.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	66.5		20.5	18.8	60.7		20.5				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	6.0	61.0		15.0	16.5	50.0		15.0				
Max Q Clear Time (g_c+I1), s	6.9	7.8		13.5	10.8	17.2		14.5				
Green Ext Time (p_c), s	0.0	3.1		0.2	0.5	7.0		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		25.2	
HCM 7th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Future Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	68	0	66	33	22	684	662	77	11	871	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	223		125	55	28	762	2190	254	23	1689	
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.22	0.68	0.68	0.03	0.95	0.00
Sat Flow, veh/h	1349	1870	1585	587	465	234	3456	3207	373	1781	3554	1585
Grp Volume(v), veh/h	55	68	0	121	0	0	684	366	373	11	871	0
Grp Sat Flow(s),veh/h/ln	1349	1870	1585	1286	0	0	1728	1777	1803	1781	1777	1585
Q Serve(g_s), s	0.0	3.3	0.0	6.2	0.0	0.0	19.2	8.2	8.3	0.6	2.4	0.0
Cycle Q Clear(g_c), s	4.4	3.3	0.0	9.6	0.0	0.0	19.2	8.2	8.3	0.6	2.4	0.0
Prop In Lane	1.00		1.00	0.55		0.18	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	215	223		209	0	0	762	1213	1231	23	1689	
V/C Ratio(X)	0.26	0.31		0.58	0.00	0.00	0.90	0.30	0.30	0.47	0.52	
Avail Cap(c_a), veh/h	331	383		337	0	0	829	1213	1231	107	1689	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	0.89	0.89	0.89	0.88	0.88	0.00
Uniform Delay (d), s/veh	40.7	40.3	0.0	43.5	0.0	0.0	37.9	6.3	6.3	48.3	1.3	0.0
Incr Delay (d2), s/veh	0.6	0.8	0.0	2.5	0.0	0.0	10.8	0.6	0.6	12.3	1.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.6	0.0	3.1	0.0	0.0	9.1	2.9	3.0	0.3	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.4	41.0	0.0	46.0	0.0	0.0	48.7	6.9	6.9	60.6	2.3	0.0
LnGrp LOS	D	D		D			D	A	A	E	A	
Approach Vol, veh/h		123			121			1423			882	
Approach Delay, s/veh		41.2			46.0			27.0			3.1	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	73.3		19.4	28.1	52.5		19.4				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	6.0	55.0		20.5	24.0	37.0		20.5				
Max Q Clear Time (g_c+I1), s	2.6	10.3		6.4	21.2	4.4		11.6				
Green Ext Time (p_c), s	0.0	5.4		0.4	0.8	7.3		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.3	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Future Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1405	0	0	1189	843	173	173	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2898		0	2898	1293	247	247	
Arrive On Green			0.00	0.81	0.00	0.00	0.54	0.54	0.07	0.07	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1405	0	0	1189	843	173	173	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	12.3	0.0	0.0	19.5	37.4	4.9	4.9	0.0
Cycle Q Clear(g_c), s			0.0	12.3	0.0	0.0	19.5	37.4	4.9	4.9	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2898		0	2898	1293	247	247	
V/C Ratio(X)			0.00	0.48		0.00	0.41	0.65	0.70	0.70	
Avail Cap(c_a), veh/h			0	2898		0	2898	1293	488	488	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.85	0.00	0.00	0.55	0.55	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	3.0	0.0	0.0	8.8	12.9	45.4	45.4	0.0
Incr Delay (d2), s/veh			0.0	0.5	0.0	0.0	0.2	1.4	3.6	3.6	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	3.0	0.0	0.0	8.3	14.6	2.2	2.2	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.5	0.0	0.0	9.1	14.4	49.0	49.0	0.0
LnGrp LOS				A			A	B	D	D	
Approach Vol, veh/h				1405			2032		173	173	
Approach Delay, s/veh				3.5			11.3		49.0	49.0	
Approach LOS				A			B		D	D	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	85.9		14.1		85.9						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	74.0		14.0		74.0						
Max Q Clear Time (g_c+I1), s	39.4		6.9		14.3						
Green Ext Time (p_c), s	17.8		0.3		16.8						

Intersection Summary		
HCM 7th Control Delay, s/veh	10.1	
HCM 7th LOS	B	

Notes
Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Future Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1302	276	132	1224	66	265	77	99	55	77	629
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	694	1790	379	162	1558	84	407	223	287	190	247	476
Arrive On Green	0.20	0.42	0.42	0.09	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	3456	4219	894	1781	4959	267	1439	743	955	463	823	1585
Grp Volume(v), veh/h	607	1050	528	132	840	450	265	0	176	132	0	629
Grp Sat Flow(s),veh/h/ln	1728	1702	1709	1781	1702	1822	720	0	1698	1287	0	1585
Q Serve(g_s), s	17.0	25.7	25.7	7.3	22.5	22.5	18.3	0.0	8.1	3.6	0.0	30.0
Cycle Q Clear(g_c), s	17.0	25.7	25.7	7.3	22.5	22.5	30.0	0.0	8.1	11.7	0.0	30.0
Prop In Lane	1.00		0.52	1.00		0.15	1.00		0.56	0.42		1.00
Lane Grp Cap(c), veh/h	694	1444	725	162	1069	573	407	0	510	437	0	476
V/C Ratio(X)	0.87	0.73	0.73	0.82	0.79	0.79	0.65	0.00	0.35	0.30	0.00	1.32
Avail Cap(c_a), veh/h	812	1444	725	187	1069	573	407	0	510	437	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	24.0	24.0	44.6	31.2	31.2	40.9	0.0	27.3	28.5	0.0	35.0
Incr Delay (d2), s/veh	8.0	2.7	5.3	21.2	5.8	10.4	3.7	0.0	0.4	0.4	0.0	159.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	10.5	11.1	4.1	9.9	11.3	3.4	0.0	3.3	2.6	0.0	32.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.8	26.7	29.3	65.9	37.0	41.6	44.6	0.0	27.7	28.9	0.0	194.4
LnGrp LOS	D	C	C	E	D	D	D		C	C		F
Approach Vol, veh/h		2185			1422			441			761	
Approach Delay, s/veh		32.9			41.2			37.9			165.7	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.6	36.4		36.0	16.6	47.4		36.0				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	23.5	28.0		30.0	10.5	41.0		30.0				
Max Q Clear Time (g_c+I1), s	19.0	24.5		32.0	9.3	27.7		32.0				
Green Ext Time (p_c), s	1.1	2.5		0.0	0.0	8.7		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			56.8									
HCM 7th LOS			E									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Future Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	676	845	0	0	901	259	0	0	0	127	0	541
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	768	2462	0	0	1423	635	0	369	0	423	0	625
Arrive On Green	0.22	0.69	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	676	845	0	0	901	259	0	0	0	127	0	541
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	18.9	9.6	0.0	0.0	20.4	11.7	0.0	0.0	0.0	6.2	0.0	16.5
Cycle Q Clear(g_c), s	18.9	9.6	0.0	0.0	20.4	11.7	0.0	0.0	0.0	6.2	0.0	16.5
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	768	2462	0	0	1423	635	0	369	0	423	0	625
V/C Ratio(X)	0.88	0.34	0.00	0.00	0.63	0.41	0.00	0.00	0.00	0.30	0.00	0.87
Avail Cap(c_a), veh/h	898	2462	0	0	1423	635	0	430	0	482	0	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.74	0.74	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	6.2	0.0	0.0	24.1	21.5	0.0	0.0	0.0	34.7	0.0	38.8
Incr Delay (d2), s/veh	9.0	0.4	0.0	0.0	1.6	1.4	0.0	0.0	0.0	0.4	0.0	9.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	3.3	0.0	0.0	8.6	4.5	0.0	0.0	0.0	2.7	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.6	6.6	0.0	0.0	25.7	22.9	0.0	0.0	0.0	35.1	0.0	48.4
LnGrp LOS	D	A			C	C				D		D
Approach Vol, veh/h		1521			1160			0			668	
Approach Delay, s/veh		24.4			25.1			0.0			45.8	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.2	45.0		25.7		74.3		25.7				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	26.0	33.0		23.0		66.0		23.0				
Max Q Clear Time (g_c+I1), s	20.9	22.4		0.0		11.6		18.5				
Green Ext Time (p_c), s	1.3	5.2		0.0		7.4		1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			28.9									
HCM 7th LOS			C									

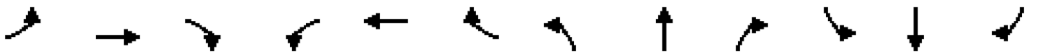
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Future Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	146	1	23	0	1160	191	23	1002	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	0
Cap, veh/h	0	233	0	248	1	276	2	1938	318	88	2659	0
Arrive On Green	0.00	0.00	0.00	0.13	0.13	0.13	0.00	0.64	0.64	0.05	0.75	0.00
Sat Flow, veh/h	0	1856	0	1399	10	1572	1767	3032	497	1767	3618	0
Grp Volume(v), veh/h	0	0	0	147	0	23	0	672	679	23	1002	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1409	0	1572	1767	1763	1766	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	10.2	0.0	1.2	0.0	22.3	22.5	1.3	9.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.2	0.0	1.2	0.0	22.3	22.5	1.3	9.8	0.0
Prop In Lane	0.00		0.00	0.99		1.00	1.00		0.28	1.00		0.00
Lane Grp Cap(c), veh/h	0	233	0	249	0	276	2	1127	1129	88	2659	0
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.08	0.00	0.60	0.60	0.26	0.38	0.00
Avail Cap(c_a), veh/h	0	399	0	375	0	417	115	1127	1129	115	2659	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.14	0.14	0.92	0.92	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.7	0.0	34.5	0.0	10.5	10.6	45.7	4.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.1	0.0	0.3	0.3	1.4	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.7	0.0	0.5	0.0	7.9	8.0	0.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.9	0.0	34.6	0.0	10.9	10.9	47.1	4.6	0.0
LnGrp LOS				D		C		B	B	D	A	
Approach Vol, veh/h		0			170			1351			1025	
Approach Delay, s/veh		0.0			43.5			10.9			5.6	
Approach LOS					D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	69.4		19.1	0.0	80.9		19.1				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	6.5	53.5		21.5	6.5	53.5		21.5				
Max Q Clear Time (g_c+I1), s	3.3	24.5		0.0	0.0	11.8		12.2				
Green Ext Time (p_c), s	0.0	11.8		0.0	0.0	9.2		0.5				

Intersection Summary			
HCM 7th Control Delay, s/veh		10.9	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h	11	0	11	23	11	56	11	732	0	0	788	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	0	0	1	1
Cap, veh/h	228	16	80	173	23	96	116	1116	0	0	1042	74
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.60	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	657	166	824	364	238	991	8	1863	0	0	1739	124
Grp Volume(v), veh/h	22	0	0	90	0	0	743	0	0	0	0	844
Grp Sat Flow(s),veh/h/ln	1648	0	0	1592	0	0	1871	0	0	0	0	1863
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.8	0.0	0.0	8.6	0.0	0.0	0.0	0.0	10.9
Prop In Lane	0.50		0.50	0.26		0.62	0.01		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	324	0	0	292	0	0	1231	0	0	0	0	1116
V/C Ratio(X)	0.07	0.00	0.00	0.31	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.76
Avail Cap(c_a), veh/h	847	0	0	856	0	0	2082	0	0	0	0	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	0.0	14.2	0.0	0.0	4.4	0.0	0.0	0.0	0.0	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.6	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.7	0.0	0.0	14.8	0.0	0.0	4.8	0.0	0.0	0.0	0.0	5.9
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		22			90			743			844	
Approach Delay, s/veh		13.7			14.8			4.8			5.9	
Approach LOS		B			B			A			A	

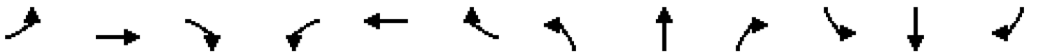
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.7		8.2		24.7		8.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		15.0		35.0		15.0				
Max Q Clear Time (g_c+I1), s		10.6		2.4		12.9		3.8				
Green Ext Time (p_c), s		5.9		0.0		6.8		0.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			6.0									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	260	170	480	250	180	480
Future Volume (veh/h)	260	170	480	250	180	480
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	290	189	535	279	201	535
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	371	330	686	911	251	1127
Arrive On Green	0.21	0.21	0.37	0.37	0.14	0.60
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	290	189	535	279	201	535
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	8.1	5.7	13.4	4.8	5.8	8.4
Cycle Q Clear(g_c), s	8.1	5.7	13.4	4.8	5.8	8.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	371	330	686	911	251	1127
V/C Ratio(X)	0.78	0.57	0.78	0.31	0.80	0.47
Avail Cap(c_a), veh/h	540	481	1063	1231	304	1559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	18.8	14.8	5.8	22.0	5.8
Incr Delay (d2), s/veh	4.6	1.6	2.0	0.2	12.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.0	5.2	2.2	3.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.3	20.4	16.8	6.0	34.0	6.2
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	479		814			736
Approach Delay, s/veh	22.8		13.1			13.8
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.4	24.4				36.8	16.0
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	7.8	15.4				10.4	10.1
Green Ext Time (p_c), s	0.1	4.0				3.9	0.9

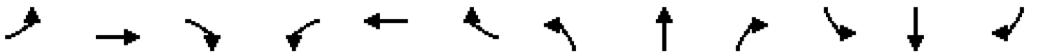
Intersection Summary	
HCM 7th Control Delay, s/veh	15.6
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Future Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	334	35	265				253	587	0	12	483	311
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	397	46	346				460	1206	0	53	909	785
Arrive On Green	0.24	0.24	0.24				0.09	0.65	0.00	0.50	0.50	0.50
Sat Flow, veh/h	1639	188	1425				1781	1870	0	15	1837	1585
Grp Volume(v), veh/h	334	0	300				253	587	0	495	0	311
Grp Sat Flow(s),veh/h/ln	1639	0	1614				1781	1870	0	1852	0	1585
Q Serve(g_s), s	15.5	0.0	13.8				5.2	13.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	15.5	0.0	13.8				5.2	13.0	0.0	14.5	0.0	9.9
Prop In Lane	1.00		0.88				1.00		0.00	0.02		1.00
Lane Grp Cap(c), veh/h	397	0	391				460	1206	0	963	0	785
V/C Ratio(X)	0.84	0.00	0.77				0.55	0.49	0.00	0.51	0.00	0.40
Avail Cap(c_a), veh/h	512	0	504				460	1206	0	963	0	785
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	0.00	0.79	0.00	0.79
Uniform Delay (d), s/veh	28.8	0.0	28.2				9.9	7.3	0.0	13.9	0.0	12.7
Incr Delay (d2), s/veh	9.6	0.0	5.3				1.4	1.4	0.0	1.6	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	5.7				1.9	4.7	0.0	6.0	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.4	0.0	33.4				11.3	8.8	0.0	15.4	0.0	13.9
LnGrp LOS	D		C				B	A		B		B
Approach Vol, veh/h		634						840			806	
Approach Delay, s/veh		36.1						9.5			14.8	
Approach LOS		D						A			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		56.6		23.4	12.0	44.6						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		46.0		25.0	7.0	34.0						
Max Q Clear Time (g_c+I1), s		15.0		17.5	7.2	16.5						
Green Ext Time (p_c), s		4.4		1.9	0.0	4.1						

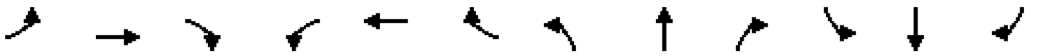
Intersection Summary												
HCM 7th Control Delay, s/veh			18.8									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Future Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	304	383	180	327	90	372	383	214	90	394	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	337	306	303	523	144	437	636	539	118	517	14
Arrive On Green	0.19	0.19	0.19	0.10	0.37	0.37	0.25	0.34	0.34	0.07	0.15	0.15
Sat Flow, veh/h	66	1743	1585	1781	1412	389	1781	1870	1585	1781	3531	98
Grp Volume(v), veh/h	327	0	383	180	0	417	372	383	214	90	198	207
Grp Sat Flow(s),veh/h/ln	1809	0	1585	1781	0	1800	1781	1870	1585	1781	1777	1853
Q Serve(g_s), s	5.9	0.0	13.0	5.1	0.0	12.8	13.4	11.4	6.9	3.3	7.2	7.2
Cycle Q Clear(g_c), s	11.9	0.0	13.0	5.1	0.0	12.8	13.4	11.4	6.9	3.3	7.2	7.2
Prop In Lane	0.07		1.00	1.00		0.22	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	407	0	306	303	0	667	437	636	539	118	260	271
V/C Ratio(X)	0.80	0.00	1.25	0.59	0.00	0.62	0.85	0.60	0.40	0.76	0.76	0.76
Avail Cap(c_a), veh/h	407	0	306	357	0	722	927	834	707	477	317	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	27.1	18.6	0.0	17.3	24.2	18.4	16.9	30.9	27.6	27.6
Incr Delay (d2), s/veh	11.2	0.0	137.0	1.9	0.0	1.5	4.8	0.9	0.5	9.6	8.4	8.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	16.3	2.1	0.0	5.1	5.9	4.7	2.4	1.7	3.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.8	0.0	164.1	20.6	0.0	18.8	29.0	19.3	17.4	40.5	36.0	35.8
LnGrp LOS	D		F	C		B	C	B	B	D	D	D
Approach Vol, veh/h		710			597			969			495	
Approach Delay, s/veh		105.9			19.4			22.6			36.7	
Approach LOS		F			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	27.9	11.9	18.0	22.5	14.9		29.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	30.0	9.0	13.0	35.0	12.0		27.0				
Max Q Clear Time (g_c+I1), s	5.3	13.4	7.1	15.0	15.4	9.2		14.8				
Green Ext Time (p_c), s	0.1	2.9	0.1	0.0	1.1	0.6		2.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	45.8
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Future Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	22	0	0	0	22	895	0	0	939	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	0	132	0	117	0	37	1424	0	0	1127	79
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.02	0.76	0.00	0.00	0.65	0.65
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1727	121
Grp Volume(v), veh/h	66	0	22	0	0	0	22	895	0	0	0	1005
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	2.6	0.0	0.7	0.0	0.0	0.0	0.7	12.4	0.0	0.0	0.0	23.5
Cycle Q Clear(g_c), s	2.6	0.0	0.7	0.0	0.0	0.0	0.7	12.4	0.0	0.0	0.0	23.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	215	0	132	0	117	0	37	1424	0	0	0	1206
V/C Ratio(X)	0.31	0.00	0.17	0.00	0.00	0.00	0.60	0.63	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	377	0	312	0	330	0	220	2801	0	0	0	2377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	24.2	0.0	0.0	0.0	27.6	3.1	0.0	0.0	0.0	7.5
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.0	0.0	0.0	14.5	0.5	0.0	0.0	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.3	0.0	0.0	0.0	0.4	1.7	0.0	0.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.0	0.0	24.8	0.0	0.0	0.0	42.1	3.6	0.0	0.0	0.0	9.1
LnGrp LOS	C		C				D	A				A
Approach Vol, veh/h		88			0			917			1005	
Approach Delay, s/veh		26.4			0.0			4.5			9.1	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		48.2		8.5	6.2	42.0		8.5				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		85.0		10.0	7.0	73.0		10.0				
Max Q Clear Time (g_c+I1), s		14.4		4.6	2.7	25.5		0.0				
Green Ext Time (p_c), s		9.3		0.1	0.0	11.6		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	7.7
HCM 7th LOS	A

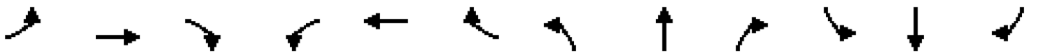
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Future Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	0	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	225	0	68	0	0	0	79	586	0	0	597	0
Peak Hour Factor	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	3	3	3	0	3	3	3	3	3	3	3	0
Cap, veh/h	471	0	279	0	330	0	146	762	0	0	978	0
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	1767	0	1572	0	1856	0	110	1445	0	0	1856	0
Grp Volume(v), veh/h	225	0	68	0	0	0	665	0	0	0	597	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572	0	1856	0	1555	0	0	0	1856	0
Q Serve(g_s), s	5.5	0.0	1.7	0.0	0.0	0.0	6.4	0.0	0.0	0.0	10.3	0.0
Cycle Q Clear(g_c), s	5.5	0.0	1.7	0.0	0.0	0.0	16.6	0.0	0.0	0.0	10.3	0.0
Prop In Lane	1.00		1.00	0.00		0.00	0.12		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	471	0	279	0	330	0	908	0	0	0	978	0
V/C Ratio(X)	0.48	0.00	0.24	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.61	0.00
Avail Cap(c_a), veh/h	968	0	722	0	872	0	1661	0	0	0	1845	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	16.2	0.0	0.0	0.0	8.7	0.0	0.0	0.0	7.5	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.4	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.6	0.0	0.0	0.0	3.5	0.0	0.0	0.0	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.5	0.0	16.6	0.0	0.0	0.0	9.8	0.0	0.0	0.0	8.2	0.0
LnGrp LOS	B		B				A				A	
Approach Vol, veh/h		293			0			665			597	
Approach Delay, s/veh		18.0			0.0			9.8			8.2	
Approach LOS		B						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.6		14.1		31.6		14.1				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		45.5		21.0		45.5		* 22				
Max Q Clear Time (g_c+I1), s		18.6		7.5		12.3		0.0				
Green Ext Time (p_c), s		5.5		0.8		4.5		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.7
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Future Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	0	6	1	0	0	6	613	0	0	613	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	151	0	20	216	0	0	91	1348	0	0	1339	13
Arrive On Green	0.03	0.00	0.03	0.03	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.73
Sat Flow, veh/h	746	0	746	1506	0	0	4	1847	0	0	1834	18
Grp Volume(v), veh/h	12	0	0	1	0	0	619	0	0	0	0	619
Grp Sat Flow(s),veh/h/ln	1491	0	0	1506	0	0	1851	0	0	0	0	1852
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	5.6
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.01
Lane Grp Cap(c), veh/h	171	0	0	216	0	0	1439	0	0	0	0	1352
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.46
Avail Cap(c_a), veh/h	565	0	0	586	0	0	1439	0	0	0	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	0.0	19.5	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	2.5
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		12			1			619			619	
Approach Delay, s/veh		19.8			19.5			2.5			2.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.1		36.0		5.1				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		7.6		2.3		7.6		2.0				
Green Ext Time (p_c), s		4.4		0.0		4.4		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			2.7									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	660	5	20	740	5	20
Future Vol, veh/h	660	5	20	740	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	768	6	23	861	6	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	773	0	1678	771
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	907	-
Critical Hdwy	-	-	4.12	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	842	-	136	450
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	436	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	842	-	129	450
Mov Cap-2 Maneuver	-	-	-	-	129	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	413	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.25	18.27
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	300	47	-	-	-
HCM Lane V/C Ratio	0.097	0.028	-	-	-
HCM Control Delay (s/veh)	18.3	9.4	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	20	700	650	50	30	40
Future Vol, veh/h	20	700	650	50	30	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	814	756	58	35	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1646	785
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	861	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	813	-	-	-	142	442
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	813	-	-	-	135	442
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	460	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0.27	0	30.09
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	50	-	223
HCM Lane V/C Ratio	-	-	0.029	-	0.365
HCM Control Delay (s/veh)	-	-	9.6	0	30.1
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.1	-	1.6

Intersection	
Int Delay, s/veh	15.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	70	730	90	70	770
Future Vol, veh/h	80	70	730	90	70	770
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	78	814	100	78	858

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1878	864	0	0	914	0
Stage 1	864	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.218	-
Pot Cap-1 Maneuver	104	399	-	-	746	-
Stage 1	459	-	-	-	-	-
Stage 2	386	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	93	399	-	-	746	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	346	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/veh	183.66	0	0.87
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	145	746	-
HCM Lane V/C Ratio	-	-	1.155	0.105	-
HCM Control Delay (s/veh)	-	-	183.7	10.4	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	9.4	0.3	-

Intersection	
Int Delay, s/veh	1.7

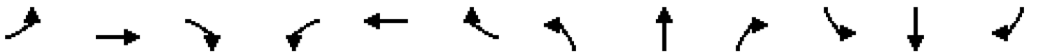
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Future Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	6	12	12	6	47	6	872	12	23	884	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1852	1861	919	1823	1890	878	954	0	0	884	0	0
Stage 1	965	965	-	890	890	-	-	-	-	-	-	-
Stage 2	887	896	-	933	1000	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	106	371	112	102	392	721	-	-	765	-	-
Stage 1	400	398	-	436	434	-	-	-	-	-	-	-
Stage 2	438	431	-	415	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	98	371	94	94	392	721	-	-	765	-	-
Mov Cap-2 Maneuver	82	98	-	94	94	-	-	-	-	-	-	-
Stage 1	373	371	-	430	427	-	-	-	-	-	-	-
Stage 2	375	425	-	370	357	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	42.29	29.45	0.07	0.23
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	12	-	-	125	210	42	-	-
HCM Lane V/C Ratio	0.008	-	-	0.232	0.304	0.03	-	-
HCM Control Delay (s/veh)	10	0	-	42.3	29.4	9.9	0	-
HCM Lane LOS	B	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	1.2	0.1	-	-

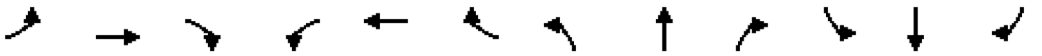
Part 7: 2035 Build Conditions: Weekday AM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Future Volume (veh/h)	40	10	100	60	10	30	380	820	350	120	500	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	46	11	114	68	11	34	433	933	398	137	569	148
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	165	33	420	141	47	145	515	1493	631	167	1545	401
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.15	0.62	0.62	0.09	0.56	0.56
Sat Flow, veh/h	898	282	1560	1246	396	1224	3401	2395	1012	1753	2748	713
Grp Volume(v), veh/h	57	0	114	68	0	45	433	679	652	137	361	356
Grp Sat Flow(s),veh/h/ln	1180	0	1560	1246	0	1620	1700	1749	1659	1753	1749	1712
Q Serve(g_s), s	3.5	0.0	6.3	6.0	0.0	2.8	13.6	26.3	26.9	8.4	12.5	12.6
Cycle Q Clear(g_c), s	6.3	0.0	6.3	12.3	0.0	2.8	13.6	26.3	26.9	8.4	12.5	12.6
Prop In Lane	0.81		1.00	1.00		0.76	1.00		0.61	1.00		0.42
Lane Grp Cap(c), veh/h	199	0	420	141	0	191	515	1090	1034	167	983	963
V/C Ratio(X)	0.29	0.00	0.27	0.48	0.00	0.23	0.84	0.62	0.63	0.82	0.37	0.37
Avail Cap(c_a), veh/h	199	0	420	141	0	191	727	1090	1034	271	983	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	31.7	51.3	0.0	44.0	45.4	12.8	12.9	48.9	13.3	13.3
Incr Delay (d2), s/veh	0.8	0.0	0.3	2.5	0.0	0.6	4.9	2.1	2.3	10.0	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	2.4	2.0	0.0	1.1	6.1	10.2	9.9	4.1	5.1	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.0	0.0	32.0	53.8	0.0	44.6	50.3	14.8	15.1	58.9	14.3	14.4
LnGrp LOS	D		C	D		D	D	B	B	E	B	B
Approach Vol, veh/h		171			113			1764			854	
Approach Delay, s/veh		37.0			50.2			23.6			21.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.4	73.6		19.0	24.1	66.9		19.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	17.0	62.0		13.0	23.5	55.0		13.0				
Max Q Clear Time (g_c+I1), s	10.4	28.9		8.3	15.6	14.6		14.3				
Green Ext Time (p_c), s	0.2	12.4		0.2	1.0	5.3		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			24.8									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Future Volume (veh/h)	170	10	330	10	10	10	460	1340	10	10	450	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	192	0	0	11	11	11	502	1463	11	11	491	0
Peak Hour Factor	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	379	0		73	65	47	587	2585	19	23	1982	
Arrive On Green	0.09	0.00	0.00	0.09	0.09	0.09	0.17	0.73	0.73	0.03	1.00	0.00
Sat Flow, veh/h	2713	0	1547	334	747	541	3374	3529	27	1739	3469	1547
Grp Volume(v), veh/h	192	0	0	33	0	0	502	719	755	11	491	0
Grp Sat Flow(s),veh/h/ln	1357	0	1547	1622	0	0	1687	1735	1821	1739	1735	1547
Q Serve(g_s), s	5.1	0.0	0.0	0.0	0.0	0.0	15.9	20.8	20.9	0.7	0.0	0.0
Cycle Q Clear(g_c), s	7.1	0.0	0.0	2.0	0.0	0.0	15.9	20.8	20.9	0.7	0.0	0.0
Prop In Lane	1.00		1.00	0.33		0.33	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	379	0		184	0	0	587	1270	1334	23	1982	
V/C Ratio(X)	0.51	0.00		0.18	0.00	0.00	0.86	0.57	0.57	0.49	0.25	
Avail Cap(c_a), veh/h	650	0		340	0	0	797	1270	1334	79	1982	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.66	0.66	0.66	0.94	0.94	0.00
Uniform Delay (d), s/veh	48.9	0.0	0.0	46.8	0.0	0.0	44.1	6.7	6.7	53.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.5	0.0	0.0	4.7	1.2	1.2	14.5	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.9	0.0	0.0	7.0	6.9	7.3	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.0	0.0	0.0	47.3	0.0	0.0	48.8	7.9	7.9	67.7	0.3	0.0
LnGrp LOS	D			D			D	A	A	E	A	
Approach Vol, veh/h		192			33			1976			502	
Approach Delay, s/veh		50.0			47.3			18.3			1.8	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	85.6		17.0	25.1	67.8		17.0				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	5.0	66.0		20.5	26.0	45.0		20.5				
Max Q Clear Time (g_c+I1), s	2.7	22.9		9.1	17.9	2.0		4.0				
Green Ext Time (p_c), s	0.0	15.4		0.5	1.3	3.7		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	17.8	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Future Volume (veh/h)	0	0	0	670	110	0	1340	520	470	0	440
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1811	1811	0	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h			0	739	0	0	1478	0	518	518	0
Peak Hour Factor			0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %			0	6	6	0	6	6	6	6	6
Cap, veh/h			0	2443		0	2443		606	606	
Arrive On Green			0.00	0.71	0.00	0.00	1.00	0.00	0.18	0.18	0.00
Sat Flow, veh/h			0	3532	1535	0	3532	1535	3346	3346	1535
Grp Volume(v), veh/h			0	739	0	0	1478	0	518	518	0
Grp Sat Flow(s),veh/h/ln			0	1721	1535	0	1721	1535	1673	1673	1535
Q Serve(g_s), s			0.0	8.7	0.0	0.0	0.0	0.0	16.5	16.5	0.0
Cycle Q Clear(g_c), s			0.0	8.7	0.0	0.0	0.0	0.0	16.5	16.5	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2443		0	2443		606	606	
V/C Ratio(X)			0.00	0.30		0.00	0.61		0.85	0.85	
Avail Cap(c_a), veh/h			0	2443		0	2443		852	852	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.97	0.00	0.00	0.80	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	5.9	0.0	0.0	0.0	0.0	43.6	43.6	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0	0.9	0.0	6.2	6.2	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	2.9	0.0	0.0	0.3	0.0	7.3	7.3	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	6.2	0.0	0.0	0.9	0.0	49.8	49.8	0.0
LnGrp LOS				A			A		D	D	
Approach Vol, veh/h				739			1478		518	518	
Approach Delay, s/veh				6.2			0.9		49.8	49.8	
Approach LOS				A			A		D	D	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	83.1		26.9		83.1						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	70.0		28.0		70.0						
Max Q Clear Time (g_c+I1), s	2.0		18.5		10.7						
Green Ext Time (p_c), s	19.0		1.4		6.3						

Intersection Summary		
HCM 7th Control Delay, s/veh	11.6	
HCM 7th LOS	B	

Notes

Unsignalized Delay for [NER, NWR, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Future Volume (veh/h)	60	800	230	80	1260	20	280	30	30	20	70	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	68	911	262	91	1434	23	319	34	34	23	80	285
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	134	2036	583	115	2808	45	498	198	198	106	339	366
Arrive On Green	0.04	0.53	0.53	0.07	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	3374	3848	1103	1739	5053	81	1926	838	838	278	1436	1547
Grp Volume(v), veh/h	68	786	387	91	943	514	319	0	68	103	0	285
Grp Sat Flow(s),veh/h/ln	1687	1662	1627	1739	1662	1811	963	0	1675	1714	0	1547
Q Serve(g_s), s	2.2	16.1	16.1	5.7	19.4	19.4	17.7	0.0	3.6	0.0	0.0	19.0
Cycle Q Clear(g_c), s	2.2	16.1	16.1	5.7	19.4	19.4	22.7	0.0	3.6	5.0	0.0	19.0
Prop In Lane	1.00		0.68	1.00		0.04	1.00		0.50	0.22		1.00
Lane Grp Cap(c), veh/h	134	1758	861	115	1847	1007	498	0	396	445	0	366
V/C Ratio(X)	0.51	0.45	0.45	0.79	0.51	0.51	0.64	0.00	0.17	0.23	0.00	0.78
Avail Cap(c_a), veh/h	230	1758	861	261	1847	1007	603	0	487	537	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	16.0	16.0	50.6	15.2	15.2	43.2	0.0	33.4	34.0	0.0	39.3
Incr Delay (d2), s/veh	2.8	0.8	1.6	11.2	1.0	1.9	1.7	0.0	0.2	0.3	0.0	6.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.1	6.2	2.8	7.3	8.2	4.3	0.0	1.5	2.3	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.6	16.8	17.6	61.8	16.2	17.0	44.8	0.0	33.6	34.3	0.0	46.2
LnGrp LOS	D	B	B	E	B	B	D		C	C		D
Approach Vol, veh/h		1241			1548			387			388	
Approach Delay, s/veh		19.1			19.1			42.9			43.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	66.1		32.0	14.8	63.2		32.0				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	7.5	52.0		32.0	16.5	43.0		32.0				
Max Q Clear Time (g_c+I1), s	4.2	21.4		24.7	7.7	18.1		21.0				
Green Ext Time (p_c), s	0.0	12.9		1.3	0.1	9.2		1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			24.3									
HCM 7th LOS			C									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Future Volume (veh/h)	140	580	0	0	1350	60	0	5	0	30	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	0	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	154	640	0	0	1489	66	0	6	0	48	0	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	0	6	6	6	6	6	6	6	6
Cap, veh/h	216	2953	0	0	2513	1121	0	76	0	236	0	64
Arrive On Green	0.06	0.86	0.00	0.00	0.73	0.73	0.00	0.04	0.00	0.04	0.00	0.04
Sat Flow, veh/h	3346	3532	0	0	3532	1535	0	1811	0	2730	0	1535
Grp Volume(v), veh/h	154	640	0	0	1489	66	0	6	0	48	0	28
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1535	0	1811	0	1365	0	1535
Q Serve(g_s), s	5.0	3.6	0.0	0.0	22.6	1.3	0.0	0.4	0.0	1.9	0.0	2.0
Cycle Q Clear(g_c), s	5.0	3.6	0.0	0.0	22.6	1.3	0.0	0.4	0.0	2.2	0.0	2.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	2953	0	0	2513	1121	0	76	0	236	0	64
V/C Ratio(X)	0.71	0.22	0.00	0.00	0.59	0.06	0.00	0.08	0.00	0.20	0.00	0.44
Avail Cap(c_a), veh/h	365	2953	0	0	2513	1121	0	115	0	296	0	98
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.66	0.66	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	1.4	0.0	0.0	7.1	4.2	0.0	50.7	0.0	51.8	0.0	51.4
Incr Delay (d2), s/veh	4.4	0.2	0.0	0.0	0.7	0.1	0.0	0.4	0.0	0.4	0.0	4.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.6	0.0	0.0	7.3	0.4	0.0	0.2	0.0	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	1.5	0.0	0.0	7.7	4.3	0.0	51.1	0.0	52.2	0.0	56.1
LnGrp LOS	D	A			A	A		D		D		E
Approach Vol, veh/h		794			1555			6			76	
Approach Delay, s/veh		11.9			7.6			51.1			53.6	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.1	85.3		10.6		99.4		10.6				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	12.0	73.0		7.0		92.0		7.0				
Max Q Clear Time (g_c+I1), s	7.0	24.6		2.4		5.6		4.2				
Green Ext Time (p_c), s	0.2	18.3		0.0		5.2		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		10.5	
HCM 7th LOS		B	

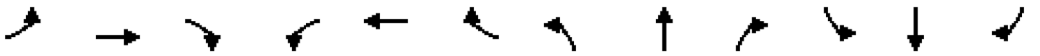
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Future Volume (veh/h)	20	5	10	10	0	10	20	1360	140	50	690	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	23	6	12	12	0	12	23	1565	161	58	794	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	81	12	17	134	0	144	40	2326	237	89	2659	40
Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.04	0.02	0.74	0.74	0.05	0.77	0.77
Sat Flow, veh/h	690	272	398	1620	0	1535	1725	3153	321	1725	3470	52
Grp Volume(v), veh/h	41	0	0	12	0	12	23	847	879	58	394	412
Grp Sat Flow(s),veh/h/ln	1361	0	0	1620	0	1535	1725	1721	1753	1725	1721	1802
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.8	1.5	27.9	29.0	3.6	7.6	7.6
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.7	0.0	0.8	1.5	27.9	29.0	3.6	7.6	7.6
Prop In Lane	0.56		0.29	1.00		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	109	0	0	134	0	144	40	1270	1294	89	1318	1381
V/C Ratio(X)	0.38	0.00	0.00	0.09	0.00	0.08	0.58	0.67	0.68	0.66	0.30	0.30
Avail Cap(c_a), veh/h	226	0	0	243	0	267	86	1270	1294	118	1318	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.12	0.12	0.12	0.98	0.98	0.98
Uniform Delay (d), s/veh	52.1	0.0	0.0	50.8	0.0	45.5	53.2	7.4	7.6	51.2	3.9	3.9
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.3	0.0	0.2	1.6	0.3	0.4	7.8	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.3	0.0	0.3	0.6	8.7	9.2	1.8	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.3	0.0	0.0	51.0	0.0	45.8	54.8	7.8	7.9	59.0	4.5	4.4
LnGrp LOS	D			D		D	D	A	A	E	A	A
Approach Vol, veh/h		41			24			1749			864	
Approach Delay, s/veh		54.3			48.4			8.5			8.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	86.7		11.2	9.0	89.8		11.2				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	7.5	70.5		13.5	5.5	72.5		13.5				
Max Q Clear Time (g_c+I1), s	5.6	31.0		5.4	3.5	9.6		2.8				
Green Ext Time (p_c), s	0.0	20.0		0.1	0.0	6.1		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			9.4									
HCM 7th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Future Volume (veh/h)	10	0	10	20	10	90	10	670	0	0	330	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h	12	0	12	23	12	105	12	779	0	0	384	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	0	0	4	4
Cap, veh/h	188	27	124	94	39	186	67	1168	0	0	1101	66
Arrive On Green	0.16	0.00	0.16	0.16	0.16	0.16	0.64	0.64	0.00	0.00	0.64	0.64
Sat Flow, veh/h	614	174	788	149	245	1183	9	1824	0	0	1719	103
Grp Volume(v), veh/h	24	0	0	140	0	0	791	0	0	0	0	407
Grp Sat Flow(s),veh/h/ln	1576	0	0	1578	0	0	1833	0	0	0	0	1822
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
Cycle Q Clear(g_c), s	0.7	0.0	0.0	4.8	0.0	0.0	16.1	0.0	0.0	0.0	0.0	6.1
Prop In Lane	0.50		0.50	0.16		0.75	0.02		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	339	0	0	319	0	0	1235	0	0	0	0	1167
V/C Ratio(X)	0.07	0.00	0.00	0.44	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.35
Avail Cap(c_a), veh/h	355	0	0	336	0	0	1235	0	0	0	0	1167
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	0.0	23.1	0.0	0.0	6.7	0.0	0.0	0.0	0.0	4.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	1.8	0.0	0.0	5.1	0.0	0.0	0.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.5	0.0	0.0	24.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0	5.8
LnGrp LOS	C			C			A					A
Approach Vol, veh/h		24			140			791			407	
Approach Delay, s/veh		21.5			24.0			9.3			5.8	
Approach LOS		C			C			A			A	

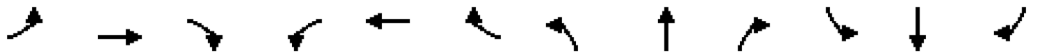
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		15.3		44.0		15.3				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		38.0		10.0		38.0		10.0				
Max Q Clear Time (g_c+I1), s		18.1		2.7		8.1		6.8				
Green Ext Time (p_c), s		5.9		0.0		2.7		0.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.0									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	40	640	320	70	290
Future Volume (veh/h)	230	40	640	320	70	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	268	47	744	372	81	337
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	327	390	895	758	111	1173
Arrive On Green	0.19	0.19	0.49	0.49	0.06	0.64
Sat Flow, veh/h	1753	1560	1841	1560	1753	1841
Grp Volume(v), veh/h	268	47	744	372	81	337
Grp Sat Flow(s),veh/h/ln	1753	1560	1841	1560	1753	1841
Q Serve(g_s), s	8.4	1.3	19.8	9.2	2.6	4.6
Cycle Q Clear(g_c), s	8.4	1.3	19.8	9.2	2.6	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	327	390	895	758	111	1173
V/C Ratio(X)	0.82	0.12	0.83	0.49	0.73	0.29
Avail Cap(c_a), veh/h	431	483	1165	987	154	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	16.5	12.6	9.9	26.2	4.6
Incr Delay (d2), s/veh	9.1	0.1	4.1	0.5	10.3	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.4	7.6	2.7	1.3	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	31.3	16.6	16.7	10.4	36.4	4.7
LnGrp LOS	C	B	B	B	D	A
Approach Vol, veh/h	315		1116			418
Approach Delay, s/veh	29.1		14.6			10.9
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.6	32.7				41.3	15.6
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	5.0	36.0				46.0	14.0
Max Q Clear Time (g_c+I1), s	4.6	21.8				6.6	10.4
Green Ext Time (p_c), s	0.0	5.8				2.2	0.4

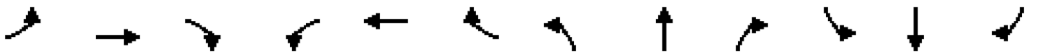
Intersection Summary	
HCM 7th Control Delay, s/veh	16.2
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Future Volume (veh/h)	320	30	240	0	0	0	430	600	5	5	240	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	372	35	279				500	698	6	6	279	314
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				4	4	4	4	4	4
Cap, veh/h	479	48	385				626	1047	9	65	473	406
Arrive On Green	0.27	0.27	0.27				0.23	0.57	0.57	0.26	0.26	0.26
Sat Flow, veh/h	1753	177	1410				1753	1822	16	11	1814	1560
Grp Volume(v), veh/h	372	0	314				500	0	704	285	0	314
Grp Sat Flow(s),veh/h/ln	1753	0	1587				1753	0	1838	1825	0	1560
Q Serve(g_s), s	11.6	0.0	10.6				11.2	0.0	15.6	0.0	0.0	11.0
Cycle Q Clear(g_c), s	11.6	0.0	10.6				11.2	0.0	15.6	8.0	0.0	11.0
Prop In Lane	1.00		0.89				1.00		0.01	0.02		1.00
Lane Grp Cap(c), veh/h	479	0	434				626	0	1056	538	0	406
V/C Ratio(X)	0.78	0.00	0.72				0.80	0.00	0.67	0.53	0.00	0.77
Avail Cap(c_a), veh/h	740	0	670				667	0	1427	856	0	685
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	19.5				11.2	0.0	8.7	19.2	0.0	20.3
Incr Delay (d2), s/veh	2.8	0.0	2.3				6.5	0.0	0.7	0.8	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	3.8				4.6	0.0	4.9	3.2	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.6	0.0	21.8				17.7	0.0	9.4	20.0	0.0	23.4
LnGrp LOS	C		C				B		A	B		C
Approach Vol, veh/h		686						1204			599	
Approach Delay, s/veh		22.3						12.9			21.8	
Approach LOS		C						B			C	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		39.0		20.2	18.6	20.4						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		46.0		25.0	15.0	26.0						
Max Q Clear Time (g_c+I1), s		17.6		13.6	13.2	13.0						
Green Ext Time (p_c), s		5.6		2.6	0.4	2.4						

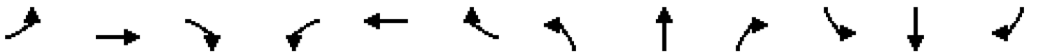
Intersection Summary												
HCM 7th Control Delay, s/veh			17.6									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Future Volume (veh/h)	5	180	230	120	390	50	410	430	200	70	280	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	209	268	140	454	58	477	500	233	81	326	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	349	301	174	566	72	523	757	641	104	561	10
Arrive On Green	0.19	0.19	0.19	0.10	0.35	0.35	0.30	0.41	0.41	0.06	0.16	0.16
Sat Flow, veh/h	16	1822	1572	1767	1612	206	1767	1856	1572	1767	3541	65
Grp Volume(v), veh/h	215	0	268	140	0	512	477	500	233	81	162	170
Grp Sat Flow(s),veh/h/ln	1838	0	1572	1767	0	1818	1767	1856	1572	1767	1763	1844
Q Serve(g_s), s	0.0	0.0	13.6	6.4	0.0	20.9	21.4	17.9	8.5	3.7	7.0	7.0
Cycle Q Clear(g_c), s	8.7	0.0	13.6	6.4	0.0	20.9	21.4	17.9	8.5	3.7	7.0	7.0
Prop In Lane	0.03		1.00	1.00		0.11	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	397	0	301	174	0	638	523	757	641	104	279	292
V/C Ratio(X)	0.54	0.00	0.89	0.81	0.00	0.80	0.91	0.66	0.36	0.78	0.58	0.58
Avail Cap(c_a), veh/h	403	0	306	215	0	686	645	858	728	129	279	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	0.0	32.4	36.3	0.0	24.1	27.9	19.7	16.9	38.1	32.0	32.0
Incr Delay (d2), s/veh	1.4	0.0	25.5	16.3	0.0	6.4	15.2	1.6	0.3	21.2	8.5	8.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	7.2	3.5	0.0	9.6	10.8	7.6	3.0	2.2	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	0.0	57.9	52.6	0.0	30.5	43.0	21.3	17.2	59.4	40.6	40.3
LnGrp LOS	C		E	D		C	D	C	B	E	D	D
Approach Vol, veh/h		483			652			1210			413	
Approach Delay, s/veh		46.3			35.3			29.1			44.2	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	38.5	13.1	20.7	30.3	18.0		33.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	38.0	10.0	16.0	30.0	13.0		31.0				
Max Q Clear Time (g_c+I1), s	5.7	19.9	8.4	15.6	23.4	9.0		22.9				
Green Ext Time (p_c), s	0.0	3.9	0.1	0.1	0.9	0.7		2.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	35.8
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Future Volume (veh/h)	20	0	10	0	0	0	40	1020	0	0	600	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	0	12	0	0	0	47	1186	0	0	698	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	183	0	48	0	57	0	67	1438	0	0	1081	90
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.04	0.77	0.00	0.00	0.64	0.64
Sat Flow, veh/h	1406	0	1572	0	1856	0	1767	1856	0	0	1690	140
Grp Volume(v), veh/h	23	0	12	0	0	0	47	1186	0	0	0	756
Grp Sat Flow(s),veh/h/ln	1406	0	1572	0	1856	0	1767	1856	0	0	0	1830
Q Serve(g_s), s	0.8	0.0	0.4	0.0	0.0	0.0	1.4	20.5	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s	0.8	0.0	0.4	0.0	0.0	0.0	1.4	20.5	0.0	0.0	0.0	13.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h	183	0	48	0	57	0	67	1438	0	0	0	1171
V/C Ratio(X)	0.13	0.00	0.25	0.00	0.00	0.00	0.70	0.82	0.00	0.00	0.00	0.65
Avail Cap(c_a), veh/h	249	0	122	0	144	0	241	2743	0	0	0	2278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	24.3	0.0	0.0	0.0	24.4	3.6	0.0	0.0	0.0	5.7
Incr Delay (d2), s/veh	0.3	0.0	2.7	0.0	0.0	0.0	12.3	1.3	0.0	0.0	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.0	0.0	0.0	0.8	1.6	0.0	0.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.9	0.0	27.0	0.0	0.0	0.0	36.8	4.9	0.0	0.0	0.0	6.3
LnGrp LOS	C		C				D	A				A
Approach Vol, veh/h		35			0			1233			756	
Approach Delay, s/veh		25.6			0.0			6.1			6.3	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.8		6.6	7.0	37.9		6.6				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		76.0		4.0	7.0	64.0		4.0				
Max Q Clear Time (g_c+I1), s		22.5		2.8	3.4	15.0		0.0				
Green Ext Time (p_c), s		17.3		0.0	0.0	6.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	6.5
HCM 7th LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	80	150	910	150	80	520
Future Volume (veh/h)	80	150	910	150	80	520
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	89	167	1014	167	89	580
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	236	210	1150	189	216	1373
Arrive On Green	0.13	0.13	0.75	0.75	0.75	0.75
Sat Flow, veh/h	1753	1560	1541	254	467	1841
Grp Volume(v), veh/h	89	167	0	1181	89	580
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1795	467	1841
Q Serve(g_s), s	3.5	7.8	0.0	36.9	13.2	8.8
Cycle Q Clear(g_c), s	3.5	7.8	0.0	36.9	50.1	8.8
Prop In Lane	1.00	1.00		0.14	1.00	
Lane Grp Cap(c), veh/h	236	210	0	1339	216	1373
V/C Ratio(X)	0.38	0.79	0.00	0.88	0.41	0.42
Avail Cap(c_a), veh/h	360	320	0	1558	273	1598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	31.6	0.0	7.1	25.7	3.6
Incr Delay (d2), s/veh	1.0	7.6	0.0	5.6	1.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.3	0.0	10.5	1.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	39.3	0.0	12.8	27.0	3.8
LnGrp LOS	C	D		B	C	A
Approach Vol, veh/h	256		1181			669
Approach Delay, s/veh	36.3		12.8			6.8
Approach LOS	D		B			A

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	60.8				60.8	14.7
Change Period (Y+Rc), s	4.5				4.5	4.5
Max Green Setting (Gmax), s	65.5				65.5	15.5
Max Q Clear Time (g_c+I1), s	38.9				52.1	9.8
Green Ext Time (p_c), s	13.2				4.2	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	13.7
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Future Volume (veh/h)	230	0	90	0	0	1	120	620	0	0	380	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	254	0	99	0	0	1	132	684	0	0	419	243
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	326	0	277	0	0	277	162	761	0	0	744	431
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.18	0.68	0.68	0.00	0.00	0.68	0.68
Sat Flow, veh/h	1405	0	1572	0	0	1572	172	1128	0	0	1102	639
Grp Volume(v), veh/h	254	0	99	0	0	1	816	0	0	0	0	662
Grp Sat Flow(s),veh/h/ln	1405	0	1572	0	0	1573	1300	0	0	0	0	1741
Q Serve(g_s), s	16.0	0.0	5.0	0.0	0.0	0.0	35.2	0.0	0.0	0.0	0.0	18.1
Cycle Q Clear(g_c), s	16.0	0.0	5.0	0.0	0.0	0.0	53.3	0.0	0.0	0.0	0.0	18.1
Prop In Lane	1.00		1.00	0.00		1.00	0.16		0.00	0.00		0.37
Lane Grp Cap(c), veh/h	326	0	277	0	0	277	923	0	0	0	0	1175
V/C Ratio(X)	0.78	0.00	0.36	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.56
Avail Cap(c_a), veh/h	326	0	277	0	0	303	1077	0	0	0	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	32.9	0.0	0.0	30.8	15.5	0.0	0.0	0.0	0.0	7.7
Incr Delay (d2), s/veh	11.4	0.0	0.8	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	1.9	0.0	0.0	0.0	15.6	0.0	0.0	0.0	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.0	0.0	33.6	0.0	0.0	30.8	23.5	0.0	0.0	0.0	0.0	8.2
LnGrp LOS	D		C			C	C					A
Approach Vol, veh/h		353			1			816			662	
Approach Delay, s/veh		44.7			30.8			23.5			8.2	
Approach LOS		D			C			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.8		22.0		68.8		22.0				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		70.5		16.0		70.5		* 18				
Max Q Clear Time (g_c+I1), s		55.3		18.0		20.1		2.0				
Green Ext Time (p_c), s		6.0		0.0		5.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	22.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Future Volume (veh/h)	5	0	5	0	0	0	10	670	0	0	320	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	6	0	6	0	0	0	11	755	0	0	360	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	141	0	11	0	29	0	93	1316	0	0	1326	0
Arrive On Green	0.02	0.00	0.02	0.00	0.00	0.00	0.72	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	736	0	736	0	1841	0	7	1828	0	0	1841	0
Grp Volume(v), veh/h	12	0	0	0	0	0	766	0	0	0	360	0
Grp Sat Flow(s),veh/h/ln	1473	0	0	0	1841	0	1835	0	0	0	1841	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	2.8	0.0
Prop In Lane	0.50		0.50	0.00		0.00	0.01		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	153	0	0	0	29	0	1409	0	0	0	1326	0
V/C Ratio(X)	0.08	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.27	0.00
Avail Cap(c_a), veh/h	342	0	0	0	309	0	1628	0	0	0	1547	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	20.3	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.6	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.1	0.0
LnGrp LOS	C						A				A	
Approach Vol, veh/h		12			0			766			360	
Approach Delay, s/veh		20.6			0.0			3.1			2.1	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.6		36.0		5.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		* 5				
Max Green Setting (Gmax), s		35.0		6.0		35.0		* 7				
Max Q Clear Time (g_c+I1), s		10.3		2.3		4.8		0.0				
Green Ext Time (p_c), s		6.1		0.0		2.3		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	3.0
HCM 7th LOS	A

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	320	50	170	740	40	130
Future Vol, veh/h	320	50	170	740	40	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	360	56	191	833	45	146

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	417	0	1605	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	1216	-
Critical Hdwy	-	-	4.15	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3	3
Pot Cap-1 Maneuver	-	-	1126	-	150	735
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1126	-	102	735
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	207	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	1.65	36.03
HCM LOS			E

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	300	336	-	-	-
HCM Lane V/C Ratio	0.639	0.17	-	-	-
HCM Control Delay (s/veh)	36	8.8	0	-	-
HCM Lane LOS	E	A	A	-	-
HCM 95th %tile Q(veh)	4.1	0.6	-	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	30	120	100	350	760	30
Future Vol, veh/h	30	120	100	350	760	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	35	140	116	407	884	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1541	901	919	0	-	0
Stage 1	901	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Critical Hdwy	6	6	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	2.236	-	-	-
Pot Cap-1 Maneuver	163	380	734	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	589	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	130	380	734	-	-	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s/v	38.5	2.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	274	400	-
HCM Lane V/C Ratio	-	-	0.636	0.158	-
HCM Control Delay (s/veh)	-	-	38.5	10.8	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	4	0.6	-

Intersection	
Int Delay, s/veh	40.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	150	910	150	80	520
Future Vol, veh/h	80	150	910	150	80	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	89	167	1014	167	89	580

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1856	1098	0	0	1181	0
Stage 1	1098	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.236	-
Pot Cap-1 Maneuver	107	294	-	-	584	-
Stage 1	349	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	91	294	-	-	584	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	$326.35	0	1.64
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	165	584	-
HCM Lane V/C Ratio	-	-	1.553	0.153	-
HCM Control Delay (s/veh)	-	-	$ 326.3	12.3	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	17	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

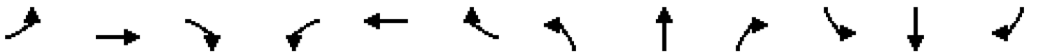
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Future Vol, veh/h	10	0	5	10	5	100	10	920	10	50	520	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	11	0	6	11	6	114	11	1047	11	57	592	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1790	1799	603	1781	1804	1053	615	0	0	1059	0	0
Stage 1	717	717	-	1076	1076	-	-	-	-	-	-	-
Stage 2	1073	1081	-	706	729	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.5	5.54	-	5.5	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.54	-	5.5	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	117	116	559	118	115	312	955	-	-	650	-	-
Stage 1	533	529	-	351	347	-	-	-	-	-	-	-
Stage 2	352	345	-	540	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	59	97	559	99	97	312	955	-	-	650	-	-
Mov Cap-2 Maneuver	59	97	-	99	97	-	-	-	-	-	-	-
Stage 1	462	458	-	341	337	-	-	-	-	-	-	-
Stage 2	214	335	-	463	452	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	58.08	35.99	0.09	0.94
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	19	-	-	85	243	151	-	-
HCM Lane V/C Ratio	0.012	-	-	0.202	0.54	0.088	-	-
HCM Control Delay (s/veh)	8.8	0	-	58.1	36	11.1	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	2.9	0.3	-	-

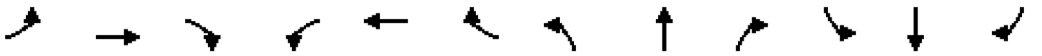
Part 8: 2035 Build Conditions: Weekday PM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Future Volume (veh/h)	70	10	280	290	20	80	230	430	80	40	1050	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	11	312	323	22	89	256	479	89	45	1170	123
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	59	733	361	121	491	302	1325	245	58	1244	131
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.09	0.44	0.44	0.03	0.38	0.38
Sat Flow, veh/h	1027	157	1585	1057	324	1311	3456	2994	553	1781	3245	341
Grp Volume(v), veh/h	89	0	312	323	0	111	256	283	285	45	640	653
Grp Sat Flow(s),veh/h/ln	1184	0	1585	1057	0	1634	1728	1777	1771	1781	1777	1809
Q Serve(g_s), s	5.3	0.0	15.8	34.2	0.0	5.5	8.8	12.7	12.8	3.0	41.6	41.8
Cycle Q Clear(g_c), s	10.8	0.0	15.8	45.0	0.0	5.5	8.8	12.7	12.8	3.0	41.6	41.8
Prop In Lane	0.88		1.00	1.00		0.80	1.00		0.31	1.00		0.19
Lane Grp Cap(c), veh/h	500	0	733	361	0	613	302	786	784	58	681	693
V/C Ratio(X)	0.18	0.00	0.43	0.89	0.00	0.18	0.85	0.36	0.36	0.78	0.94	0.94
Avail Cap(c_a), veh/h	500	0	733	361	0	613	302	786	784	104	681	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	21.6	44.0	0.0	25.1	54.0	22.2	22.2	57.6	35.6	35.7
Incr Delay (d2), s/veh	0.2	0.0	0.4	23.5	0.0	0.1	19.0	1.2	1.3	19.6	22.4	22.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	5.9	12.1	0.0	2.2	4.6	5.6	5.6	1.7	21.9	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.5	0.0	22.0	67.6	0.0	25.3	72.9	23.4	23.5	77.2	58.0	58.4
LnGrp LOS	C		C	E		C	E	C	C	E	E	E
Approach Vol, veh/h		401			434			824			1338	
Approach Delay, s/veh		23.4			56.7			38.8			58.8	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	58.1		51.0	18.0	51.0		51.0				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	7.0	50.0		45.0	10.5	46.0		45.0				
Max Q Clear Time (g_c+I1), s	5.0	14.8		17.8	10.8	43.8		47.0				
Green Ext Time (p_c), s	0.0	3.9		1.7	0.0	1.6		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		48.3	
HCM 7th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Future Volume (veh/h)	70	10	490	20	5	5	430	650	20	10	1230	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	0	0	22	6	6	474	717	22	11	1357	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	0		86	15	11	547	2787	85	23	2296	
Arrive On Green	0.04	0.00	0.00	0.04	0.04	0.04	0.16	0.79	0.79	0.03	1.00	0.00
Sat Flow, veh/h	2805	0	1585	891	375	271	3456	3520	108	1781	3554	1585
Grp Volume(v), veh/h	85	0	0	34	0	0	474	362	377	11	1357	0
Grp Sat Flow(s),veh/h/ln	1402	0	1585	1537	0	0	1728	1777	1851	1781	1777	1585
Q Serve(g_s), s	0.3	0.0	0.0	2.1	0.0	0.0	16.1	6.4	6.4	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	2.6	0.0	0.0	16.1	6.4	6.4	0.7	0.0	0.0
Prop In Lane	1.00		1.00	0.65		0.18	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	252	0		113	0	0	547	1407	1466	23	2296	
V/C Ratio(X)	0.34	0.00		0.30	0.00	0.00	0.87	0.26	0.26	0.48	0.59	
Avail Cap(c_a), veh/h	545	0		271	0	0	691	1407	1466	134	2296	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	0.50	0.50	0.00
Uniform Delay (d), s/veh	56.5	0.0	0.0	56.4	0.0	0.0	49.2	3.3	3.3	58.1	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.5	0.0	0.0	8.7	0.4	0.4	7.7	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.1	0.0	0.0	7.6	2.0	2.1	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.3	0.0	0.0	57.8	0.0	0.0	58.0	3.7	3.7	65.8	0.6	0.0
LnGrp LOS	E			E			E	A	A	E	A	
Approach Vol, veh/h		85			34			1213			1368	
Approach Delay, s/veh		57.3			57.8			24.9			1.1	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	100.0		12.4	25.0	82.5		12.4				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	9.0	75.0		17.5	24.0	60.0		17.5				
Max Q Clear Time (g_c+I1), s	2.7	8.4		4.9	18.1	2.0		4.6				
Green Ext Time (p_c), s	0.0	5.4		0.2	1.0	15.7		0.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.3	
HCM 7th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations				↑↑	↱		↑↑	↱	↰↰		↱
Traffic Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Future Volume (veh/h)	0	0	0	1460	260	0	920	650	180	0	600
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1578	0	0	994	703	195	195	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2952		0	2952	1317	264	264	
Arrive On Green			0.00	0.82	0.00	0.00	1.00	1.00	0.08	0.08	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1578	0	0	994	703	195	195	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	16.6	0.0	0.0	0.0	0.0	6.6	6.6	0.0
Cycle Q Clear(g_c), s			0.0	16.6	0.0	0.0	0.0	0.0	6.6	6.6	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2952		0	2952	1317	264	264	
V/C Ratio(X)			0.00	0.53		0.00	0.34	0.53	0.74	0.74	
Avail Cap(c_a), veh/h			0	2952		0	2952	1317	668	668	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.80	0.00	0.00	0.81	0.81	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	3.3	0.0	0.0	0.0	0.0	54.3	54.3	0.0
Incr Delay (d2), s/veh			0.0	0.6	0.0	0.0	0.3	1.3	4.0	4.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	4.4	0.0	0.0	0.1	0.5	3.0	3.0	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.9	0.0	0.0	0.3	1.3	58.3	58.3	0.0
LnGrp LOS				A			A	A	E	E	
Approach Vol, veh/h				1578			1697		195	195	
Approach Delay, s/veh				3.9			0.7		58.3	58.3	
Approach LOS				A			A		E	E	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	103.9		16.1		103.9						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	85.0		23.0		85.0						
Max Q Clear Time (g_c+I1), s	2.0		8.6		18.6						
Green Ext Time (p_c), s	15.9		0.5		21.3						

Intersection Summary	
HCM 7th Control Delay, s/veh	5.4
HCM 7th LOS	A

Notes

Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Future Volume (veh/h)	370	1320	340	110	890	60	270	90	90	40	100	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	408	1456	375	121	982	66	298	99	99	44	110	375
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1826	468	148	1928	129	462	268	268	141	333	495
Arrive On Green	0.14	0.45	0.45	0.08	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	3456	4050	1037	1781	4887	328	1767	858	858	326	1065	1585
Grp Volume(v), veh/h	408	1222	609	121	683	365	298	0	198	154	0	375
Grp Sat Flow(s),veh/h/ln	1728	1702	1684	1781	1702	1811	883	0	1716	1392	0	1585
Q Serve(g_s), s	13.8	36.9	37.3	8.0	18.3	18.3	19.6	0.0	10.8	3.5	0.0	25.6
Cycle Q Clear(g_c), s	13.8	36.9	37.3	8.0	18.3	18.3	33.9	0.0	10.8	14.3	0.0	25.6
Prop In Lane	1.00		0.62	1.00		0.18	1.00		0.50	0.29		1.00
Lane Grp Cap(c), veh/h	481	1534	759	148	1343	715	462	0	536	473	0	495
V/C Ratio(X)	0.85	0.80	0.80	0.82	0.51	0.51	0.65	0.00	0.37	0.33	0.00	0.76
Avail Cap(c_a), veh/h	648	1534	759	215	1343	715	528	0	601	534	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.4	28.2	28.3	54.1	27.5	27.5	47.0	0.0	32.1	32.6	0.0	37.2
Incr Delay (d2), s/veh	6.7	3.7	7.4	14.7	1.4	2.6	2.2	0.0	0.4	0.4	0.0	5.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	15.5	16.3	4.2	7.7	8.4	4.4	0.0	4.6	3.7	0.0	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.1	31.9	35.7	68.9	28.9	30.1	49.2	0.0	32.5	33.0	0.0	42.5
LnGrp LOS	E	C	D	E	C	C	D		C	C		D
Approach Vol, veh/h		2239			1169			496			529	
Approach Delay, s/veh		37.5			33.4			42.5			39.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.2	52.3		43.5	17.4	59.1		43.5				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	22.5	37.0		42.0	14.5	45.0		42.0				
Max Q Clear Time (g_c+I1), s	15.8	20.3		35.9	10.0	39.3		27.6				
Green Ext Time (p_c), s	0.9	6.6		1.6	0.1	4.7		2.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		37.3	
HCM 7th LOS		D	

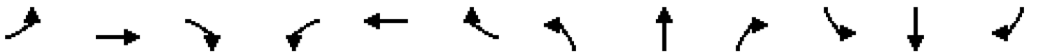
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Future Volume (veh/h)	350	1120	0	0	780	140	0	0	0	160	0	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	394	1261	0	0	879	158	0	0	0	120	0	391
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	474	2699	0	0	2004	894	0	278	0	325	0	472
Arrive On Green	0.14	0.76	0.00	0.00	0.56	0.56	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	394	1261	0	0	879	158	0	0	0	120	0	391
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	13.3	15.9	0.0	0.0	17.2	5.8	0.0	0.0	0.0	7.4	0.0	14.4
Cycle Q Clear(g_c), s	13.3	15.9	0.0	0.0	17.2	5.8	0.0	0.0	0.0	7.4	0.0	14.4
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	474	2699	0	0	2004	894	0	278	0	325	0	472
V/C Ratio(X)	0.83	0.47	0.00	0.00	0.44	0.18	0.00	0.00	0.00	0.37	0.00	0.83
Avail Cap(c_a), veh/h	778	2699	0	0	2004	894	0	421	0	461	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.86	0.86	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.4	5.4	0.0	0.0	15.2	12.7	0.0	0.0	0.0	46.6	0.0	49.6
Incr Delay (d2), s/veh	4.0	0.6	0.0	0.0	0.6	0.4	0.0	0.0	0.0	0.7	0.0	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	5.2	0.0	0.0	7.0	2.1	0.0	0.0	0.0	3.3	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.5	6.0	0.0	0.0	15.8	13.0	0.0	0.0	0.0	47.3	0.0	54.6
LnGrp LOS	D	A			B	B				D		D
Approach Vol, veh/h		1655			1037			0			511	
Approach Delay, s/veh		17.5			15.3			0.0			52.9	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	23.4	72.7		23.9		96.1		23.9				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	27.0	48.0		27.0		82.0		27.0				
Max Q Clear Time (g_c+I1), s	15.3	19.2		0.0		17.9		16.4				
Green Ext Time (p_c), s	1.1	7.8		0.0		14.0		1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			22.5									
HCM 7th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Future Volume (veh/h)	30	1	20	140	1	90	20	830	130	10	1300	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	34	1	23	158	1	101	23	935	146	11	1464	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	13	32	264	1	352	39	1900	297	74	2258	52
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.62	0.62	0.04	0.64	0.64
Sat Flow, veh/h	198	73	178	1120	7	1572	1767	3055	477	1767	3522	82
Grp Volume(v), veh/h	58	0	0	159	0	101	23	539	542	11	732	766
Grp Sat Flow(s),veh/h/ln	449	0	0	1127	0	1572	1767	1763	1770	1767	1763	1841
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	6.4	1.5	20.0	20.0	0.7	30.6	30.7
Cycle Q Clear(g_c), s	19.7	0.0	0.0	16.6	0.0	6.4	1.5	20.0	20.0	0.7	30.6	30.7
Prop In Lane	0.59		0.40	0.99		1.00	1.00		0.27	1.00		0.04
Lane Grp Cap(c), veh/h	129	0	0	265	0	352	39	1096	1100	74	1130	1180
V/C Ratio(X)	0.45	0.00	0.00	0.60	0.00	0.29	0.58	0.49	0.49	0.15	0.65	0.65
Avail Cap(c_a), veh/h	264	0	0	399	0	505	125	1096	1100	125	1130	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.42	0.42	0.42	0.84	0.84	0.84
Uniform Delay (d), s/veh	50.2	0.0	0.0	46.9	0.0	38.6	58.1	12.4	12.4	55.4	13.2	13.2
Incr Delay (d2), s/veh	2.4	0.0	0.0	2.2	0.0	0.4	5.6	0.7	0.7	0.8	2.4	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	4.7	0.0	2.5	0.8	7.8	7.8	0.3	12.1	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.6	0.0	0.0	49.0	0.0	39.0	63.7	13.0	13.0	56.2	15.6	15.6
LnGrp LOS	D			D		D	E	B	B	E	B	B
Approach Vol, veh/h		58			260			1104			1509	
Approach Delay, s/veh		52.6			45.2			14.1			15.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	80.1		28.4	9.2	82.4		28.4				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	8.5	59.5		33.5	8.5	59.5		33.5				
Max Q Clear Time (g_c+I1), s	2.7	22.0		21.7	3.5	32.7		18.6				
Green Ext Time (p_c), s	0.0	9.1		0.2	0.0	13.0		1.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		18.5	
HCM 7th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	480	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	11	0	11	22	11	56	11	535	0	0	780	56
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	228	16	79	171	23	97	118	1101	0	0	1031	74
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.60	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	656	161	818	348	238	995	10	1841	0	0	1724	124
Grp Volume(v), veh/h	22	0	0	89	0	0	546	0	0	0	0	836
Grp Sat Flow(s),veh/h/ln	1635	0	0	1582	0	0	1851	0	0	0	0	1848
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.7	0.0	0.0	5.4	0.0	0.0	0.0	0.0	10.9
Prop In Lane	0.50		0.50	0.25		0.63	0.02		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	323	0	0	290	0	0	1219	0	0	0	0	1105
V/C Ratio(X)	0.07	0.00	0.00	0.31	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.76
Avail Cap(c_a), veh/h	846	0	0	855	0	0	2067	0	0	0	0	1974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	14.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.6	0.0	0.0	14.7	0.0	0.0	4.0	0.0	0.0	0.0	0.0	5.9
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		22			89			546			836	
Approach Delay, s/veh		13.6			14.7			4.0			5.9	
Approach LOS		B			B			A			A	

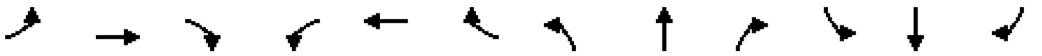
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.6		8.2		24.6		8.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		15.0		35.0		15.0				
Max Q Clear Time (g_c+I1), s		7.4		2.4		12.9		3.7				
Green Ext Time (p_c), s		4.0		0.0		6.7		0.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			5.9									
HCM 7th LOS			A									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	120	370	310	170	560
Future Volume (veh/h)	290	120	370	310	170	560
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	134	412	346	189	624
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	415	369	589	869	244	1042
Arrive On Green	0.23	0.23	0.32	0.32	0.14	0.56
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	323	134	412	346	189	624
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	8.1	3.4	9.2	6.0	4.9	10.6
Cycle Q Clear(g_c), s	8.1	3.4	9.2	6.0	4.9	10.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	415	369	589	869	244	1042
V/C Ratio(X)	0.78	0.36	0.70	0.40	0.78	0.60
Avail Cap(c_a), veh/h	711	632	943	1168	449	1610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	15.3	14.3	6.2	19.8	7.0
Incr Delay (d2), s/veh	3.2	0.6	1.5	0.3	5.2	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.1	3.5	2.8	2.2	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	20.3	15.9	15.8	6.5	25.1	7.6
LnGrp LOS	C	B	B	A	C	A
Approach Vol, veh/h	457		758			813
Approach Delay, s/veh	19.0		11.6			11.6
Approach LOS	B		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.5	20.0				31.5	16.1
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	12.0	24.0				41.0	19.0
Max Q Clear Time (g_c+I1), s	6.9	11.2				12.6	10.1
Green Ext Time (p_c), s	0.2	3.2				4.7	1.0

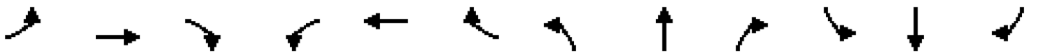
Intersection Summary			
HCM 7th Control Delay, s/veh		13.3	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Future Volume (veh/h)	330	120	250	0	0	0	300	380	10	20	440	320
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	364	132	276				331	419	11	22	485	353
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	457	150	314				447	1104	29	62	758	668
Arrive On Green	0.28	0.28	0.28				0.12	0.61	0.61	0.42	0.42	0.42
Sat Flow, veh/h	1639	539	1128				1781	1814	48	37	1799	1585
Grp Volume(v), veh/h	364	0	408				331	0	430	507	0	353
Grp Sat Flow(s),veh/h/ln	1639	0	1667				1781	0	1862	1836	0	1585
Q Serve(g_s), s	16.5	0.0	18.7				7.8	0.0	9.4	0.0	0.0	13.3
Cycle Q Clear(g_c), s	16.5	0.0	18.7				7.8	0.0	9.4	17.2	0.0	13.3
Prop In Lane	1.00		0.68				1.00		0.03	0.04		1.00
Lane Grp Cap(c), veh/h	457	0	465				447	0	1133	821	0	668
V/C Ratio(X)	0.80	0.00	0.88				0.74	0.00	0.38	0.62	0.00	0.53
Avail Cap(c_a), veh/h	512	0	521				470	0	1133	821	0	668
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	0.00	1.00	0.72	0.00	0.72
Uniform Delay (d), s/veh	26.7	0.0	27.5				13.6	0.0	8.0	18.4	0.0	17.2
Incr Delay (d2), s/veh	7.8	0.0	14.5				5.8	0.0	1.0	2.5	0.0	2.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	9.0				3.4	0.0	3.6	7.5	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.5	0.0	42.0				19.5	0.0	8.9	20.9	0.0	19.4
LnGrp LOS	C		D				B		A	C		B
Approach Vol, veh/h		772						761			860	
Approach Delay, s/veh		38.5						13.5			20.3	
Approach LOS		D						B			C	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		53.7		26.3	15.0	38.7						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		46.0		25.0	11.0	30.0						
Max Q Clear Time (g_c+I1), s		11.4		20.7	9.8	19.2						
Green Ext Time (p_c), s		3.0		1.6	0.1	3.5						

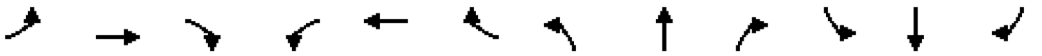
Intersection Summary												
HCM 7th Control Delay, s/veh			24.0									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Future Volume (veh/h)	0	300	360	210	360	50	270	330	180	200	400	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	331	397	232	397	55	298	364	199	221	441	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	507	429	350	696	96	342	437	370	262	624	16
Arrive On Green	0.00	0.27	0.27	0.10	0.43	0.43	0.19	0.23	0.23	0.15	0.18	0.18
Sat Flow, veh/h	0	1870	1585	1781	1608	223	1781	1870	1585	1781	3543	88
Grp Volume(v), veh/h	0	331	397	232	0	452	298	364	199	221	221	231
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1781	0	1830	1781	1870	1585	1781	1777	1854
Q Serve(g_s), s	0.0	12.6	19.6	7.3	0.0	14.9	13.0	14.9	8.8	9.7	9.4	9.4
Cycle Q Clear(g_c), s	0.0	12.6	19.6	7.3	0.0	14.9	13.0	14.9	8.8	9.7	9.4	9.4
Prop In Lane	0.00		1.00	1.00		0.12	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	0	507	429	350	0	792	342	437	370	262	313	326
V/C Ratio(X)	0.00	0.65	0.92	0.66	0.00	0.57	0.87	0.83	0.54	0.84	0.71	0.71
Avail Cap(c_a), veh/h	0	512	434	350	0	798	444	582	493	333	420	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.9	28.5	18.8	0.0	17.2	31.5	29.3	27.0	33.4	31.1	31.1
Incr Delay (d2), s/veh	0.0	2.9	25.5	4.6	0.0	1.0	13.9	7.7	1.2	14.5	3.5	3.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	10.1	3.3	0.0	6.1	6.7	7.4	3.4	5.1	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	28.9	54.0	23.5	0.0	18.1	45.4	37.0	28.2	47.9	34.6	34.5
LnGrp LOS		C	D	C		B	D	D	C	D	C	C
Approach Vol, veh/h		728			684			861			673	
Approach Delay, s/veh		42.6			19.9			37.9			38.9	
Approach LOS		D			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	16.8	23.8	13.0	26.8	21.4	19.1		39.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0	8.0	22.0	20.0	19.0		35.0				
Max Q Clear Time (g_c+I1), s	11.7	16.9	9.3	21.6	15.0	11.4		16.9				
Green Ext Time (p_c), s	0.2	1.9	0.0	0.2	0.4	1.6		2.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Future Volume (veh/h)	80	0	40	0	0	0	40	720	0	0	890	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	0	44	0	0	0	44	794	0	0	982	66
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	0	179	0	153	0	56	1509	0	0	1248	84
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.06	1.00	0.00	0.00	0.72	0.72
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1733	116
Grp Volume(v), veh/h	88	0	44	0	0	0	44	794	0	0	0	1048
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	5.5	0.0	2.3	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	32.9
Cycle Q Clear(g_c), s	5.5	0.0	2.3	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	32.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	196	0	179	0	153	0	56	1509	0	0	0	1332
V/C Ratio(X)	0.45	0.00	0.25	0.00	0.00	0.00	0.79	0.53	0.00	0.00	0.00	0.79
Avail Cap(c_a), veh/h	269	0	261	0	249	0	198	1509	0	0	0	1332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.74	0.74	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	36.4	0.0	0.0	0.0	41.9	0.0	0.0	0.0	0.0	8.1
Incr Delay (d2), s/veh	1.6	0.0	0.7	0.0	0.0	0.0	16.5	1.0	0.0	0.0	0.0	4.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.9	0.0	0.0	0.0	1.2	0.4	0.0	0.0	0.0	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.0	0.0	37.1	0.0	0.0	0.0	58.4	1.0	0.0	0.0	0.0	12.9
LnGrp LOS	D		D				E	A				B
Approach Vol, veh/h		132			0			838			1048	
Approach Delay, s/veh		40.4			0.0			4.0			12.9	
Approach LOS		D						A			B	

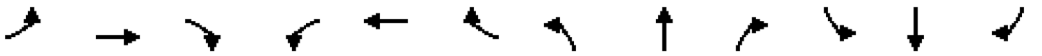
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.6		12.4	7.8	69.8		12.4				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		68.0		12.0	10.0	53.0		12.0				
Max Q Clear Time (g_c+I1), s		2.0		7.5	4.2	34.9		0.0				
Green Ext Time (p_c), s		7.4		0.2	0.0	8.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.0									
HCM 7th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	120	660	140	90	860
Future Volume (veh/h)	90	120	660	140	90	860
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	134	736	156	100	959
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	194	172	1167	247	434	1459
Arrive On Green	0.11	0.11	0.78	0.78	1.00	1.00
Sat Flow, veh/h	1781	1585	1496	317	624	1870
Grp Volume(v), veh/h	100	134	0	892	100	959
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1813	624	1870
Q Serve(g_s), s	4.8	7.4	0.0	19.2	5.0	0.0
Cycle Q Clear(g_c), s	4.8	7.4	0.0	19.2	24.1	0.0
Prop In Lane	1.00	1.00		0.17	1.00	
Lane Grp Cap(c), veh/h	194	172	0	1414	434	1459
V/C Ratio(X)	0.52	0.78	0.00	0.63	0.23	0.66
Avail Cap(c_a), veh/h	336	299	0	1414	434	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.47	0.47
Uniform Delay (d), s/veh	37.9	39.0	0.0	4.3	3.3	0.0
Incr Delay (d2), s/veh	2.1	7.3	0.0	2.1	0.6	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.2	0.0	5.4	0.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	40.0	46.4	0.0	6.4	3.9	1.1
LnGrp LOS	D	D		A	A	A
Approach Vol, veh/h	234		892			1059
Approach Delay, s/veh	43.6		6.4			1.4
Approach LOS	D		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	75.2			75.2	14.8
Change Period (Y+Rc), s	5.0			5.0	5.0
Max Green Setting (Gmax), s	63.0			63.0	17.0
Max Q Clear Time (g_c+I1), s	21.2			26.1	9.4
Green Ext Time (p_c), s	9.1			11.4	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	8.0
HCM 7th LOS	A



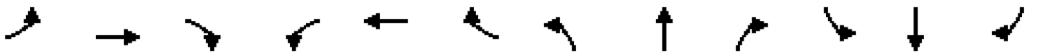
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Future Volume (veh/h)	250	1	90	0	0	0	60	410	1	0	670	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	1	102	0	0	0	68	467	1	0	763	307
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	3	281	0	334	0	80	526	1	0	880	354
Arrive On Green	0.18	0.18	0.18	0.00	0.00	0.00	0.69	0.69	0.69	0.00	0.69	0.69
Sat Flow, veh/h	1781	15	1572	0	1870	0	60	758	2	0	1268	510
Grp Volume(v), veh/h	285	0	103	0	0	0	536	0	0	0	0	1070
Grp Sat Flow(s),veh/h/ln	1781	0	1587	0	1870	0	820	0	0	0	0	1779
Q Serve(g_s), s	16.6	0.0	6.1	0.0	0.0	0.0	21.6	0.0	0.0	0.0	0.0	49.1
Cycle Q Clear(g_c), s	16.6	0.0	6.1	0.0	0.0	0.0	70.7	0.0	0.0	0.0	0.0	49.1
Prop In Lane	1.00		0.99	0.00		0.00	0.13		0.00	0.00		0.29
Lane Grp Cap(c), veh/h	386	0	284	0	334	0	607	0	0	0	0	1235
V/C Ratio(X)	0.74	0.00	0.36	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.87
Avail Cap(c_a), veh/h	420	0	314	0	378	0	630	0	0	0	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	38.3	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0	12.5
Incr Delay (d2), s/veh	6.2	0.0	0.8	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	2.4	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.9	0.0	39.1	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0	19.0
LnGrp LOS	D		D				C					B
Approach Vol, veh/h		388			0			536			1070	
Approach Delay, s/veh		46.3			0.0			30.1			19.0	
Approach LOS		D						C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.3		25.0		81.3		25.0				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		75.5		21.0		75.5		* 22				
Max Q Clear Time (g_c+I1), s		72.7		18.6		51.1		0.0				
Green Ext Time (p_c), s		1.1		0.4		10.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Future Volume (veh/h)	5	0	5	1	0	0	5	470	0	0	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	6	0	6	1	0	0	6	524	0	0	758	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	151	0	20	215	0	0	92	1335	0	0	1343	0
Arrive On Green	0.03	0.00	0.03	0.03	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	740	0	740	1495	0	0	4	1829	0	0	1841	0
Grp Volume(v), veh/h	12	0	0	1	0	0	530	0	0	0	758	0
Grp Sat Flow(s),veh/h/ln	1480	0	0	1495	0	0	1834	0	0	0	1841	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	7.8	0.0
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	171	0	0	215	0	0	1427	0	0	0	1343	0
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.56	0.00
Avail Cap(c_a), veh/h	562	0	0	583	0	0	1427	0	0	0	1343	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	19.6	0.0	0.0	19.5	0.0	0.0	2.1	0.0	0.0	0.0	2.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.5	0.0	0.0	2.3	0.0	0.0	0.0	3.1	0.0
LnGrp LOS	B			B			A				A	
Approach Vol, veh/h		12			1			530			758	
Approach Delay, s/veh		19.8			19.5			2.3			3.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.1		36.0		5.1				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		6.5		2.3		9.8		2.0				
Green Ext Time (p_c), s		3.6		0.0		5.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			2.9									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	1.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	800	20	55	620	10	40
Future Vol, veh/h	800	20	55	620	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	920	23	63	713	12	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	943	0	1772	932
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	840	-
Critical Hdwy	-	-	4.12	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	727	-	120	365
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	727	-	103	365
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	403	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.85	24.51
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	241	147	-	-	-
HCM Lane V/C Ratio	0.238	0.087	-	-	-
HCM Control Delay (s/veh)	24.5	10.4	0	-	-
HCM Lane LOS	C	B	A	-	-
HCM 95th %tile Q(veh)	0.9	0.3	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	100	740	550	20	30	100
Future Vol, veh/h	100	740	550	20	30	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	842	626	23	34	114

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	649	0	-	0	1707	637
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	1070	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	937	-	-	-	131	535
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	362	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	937	-	-	-	101	535
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	362	-

Approach	SE	NW	SW
HCM Control Delay, s/v	1.12	0	33.75
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	214	-	268
HCM Lane V/C Ratio	-	-	0.121	-	0.552
HCM Control Delay (s/veh)	-	-	9.4	0	33.8
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.4	-	3.1

Intersection	
Int Delay, s/veh	19.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Future Vol, veh/h	40	20	20	5	5	65	20	690	10	50	910	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	24	24	6	6	76	24	811	12	59	1070	47

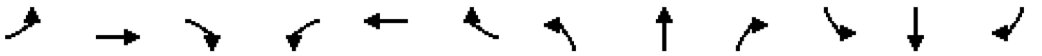
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2072	2081	1094	2064	2099	817	1117	0	0	823	0	0
Stage 1	1211	1211	-	864	864	-	-	-	-	-	-	-
Stage 2	861	870	-	1199	1235	-	-	-	-	-	-	-
Critical Hdwy	6	6	6	6	6	6	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	80	79	296	81	77	424	625	-	-	807	-	-
Stage 1	300	298	-	450	447	-	-	-	-	-	-	-
Stage 2	451	444	-	304	289	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 45	59	296	37	58	424	625	-	-	807	-	-
Mov Cap-2 Maneuver	~ 45	59	-	37	58	-	-	-	-	-	-	-
Stage 1	241	240	-	418	416	-	-	-	-	-	-	-
Stage 2	339	413	-	203	233	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $/+	411.81	36.43	0.31	0.49
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	50	-	-	62	200	89	-	-
HCM Lane V/C Ratio	0.038	-	-	1.521	0.441	0.073	-	-
HCM Control Delay (s/veh)	11	0	-	$ 411.8	36.4	9.8	0	-
HCM Lane LOS	B	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	8.3	2.1	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

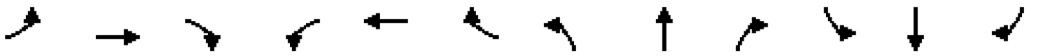
Part 9: 2035 Build Conditions: Weekend Saturday PM Peak-Hour LOS and Delays



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Future Volume (veh/h)	50	10	190	70	5	30	280	370	50	80	800	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	11	212	78	6	33	312	412	56	89	892	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	36	409	172	36	199	392	1935	261	107	1945	72
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.62	0.62	0.06	0.56	0.56
Sat Flow, veh/h	1023	252	1585	1158	250	1373	3456	3146	425	1781	3495	129
Grp Volume(v), veh/h	67	0	212	78	0	39	312	232	236	89	454	471
Grp Sat Flow(s),veh/h/ln	1274	0	1585	1158	0	1623	1728	1777	1794	1781	1777	1847
Q Serve(g_s), s	3.8	0.0	11.5	6.6	0.0	2.1	8.8	5.8	5.8	4.9	15.2	15.2
Cycle Q Clear(g_c), s	5.9	0.0	11.5	12.5	0.0	2.1	8.8	5.8	5.8	4.9	15.2	15.2
Prop In Lane	0.84		1.00	1.00		0.85	1.00		0.24	1.00		0.07
Lane Grp Cap(c), veh/h	251	0	409	172	0	235	392	1093	1104	107	989	1028
V/C Ratio(X)	0.27	0.00	0.52	0.45	0.00	0.17	0.80	0.21	0.21	0.83	0.46	0.46
Avail Cap(c_a), veh/h	258	0	418	178	0	243	570	1093	1104	107	989	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	31.8	44.8	0.0	37.5	43.2	8.5	8.5	46.5	13.2	13.2
Incr Delay (d2), s/veh	0.6	0.0	1.1	1.9	0.0	0.3	4.7	0.4	0.4	40.3	1.5	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.5	2.0	0.0	0.9	4.0	2.2	2.3	3.4	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	32.8	46.6	0.0	37.8	47.9	8.9	9.0	86.8	14.7	14.7
LnGrp LOS	D		C	D		D	D	A	A	F	B	B
Approach Vol, veh/h		279			117			780			1014	
Approach Delay, s/veh		34.6			43.7			24.5			21.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	66.5		20.5	18.8	60.7		20.5				
Change Period (Y+Rc), s	7.0	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	6.0	61.0		15.0	16.5	50.0		15.0				
Max Q Clear Time (g_c+I1), s	6.9	7.8		13.5	10.8	17.2		14.5				
Green Ext Time (p_c), s	0.0	3.1		0.2	0.5	7.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		25.2
HCM 7th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Future Volume (veh/h)	80	20	570	60	30	20	620	600	70	10	790	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	68	0	66	33	22	684	662	77	11	871	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	223		125	55	28	762	2190	254	23	1689	
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.22	0.68	0.68	0.03	0.95	0.00
Sat Flow, veh/h	1349	1870	1585	587	465	234	3456	3207	373	1781	3554	1585
Grp Volume(v), veh/h	55	68	0	121	0	0	684	366	373	11	871	0
Grp Sat Flow(s),veh/h/ln	1349	1870	1585	1286	0	0	1728	1777	1803	1781	1777	1585
Q Serve(g_s), s	0.0	3.3	0.0	6.2	0.0	0.0	19.2	8.2	8.3	0.6	2.4	0.0
Cycle Q Clear(g_c), s	4.4	3.3	0.0	9.6	0.0	0.0	19.2	8.2	8.3	0.6	2.4	0.0
Prop In Lane	1.00		1.00	0.55		0.18	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	215	223		209	0	0	762	1213	1231	23	1689	
V/C Ratio(X)	0.26	0.31		0.58	0.00	0.00	0.90	0.30	0.30	0.47	0.52	
Avail Cap(c_a), veh/h	331	383		337	0	0	829	1213	1231	107	1689	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	0.89	0.89	0.89	0.88	0.88	0.00
Uniform Delay (d), s/veh	40.7	40.3	0.0	43.5	0.0	0.0	37.9	6.3	6.3	48.3	1.3	0.0
Incr Delay (d2), s/veh	0.6	0.8	0.0	2.5	0.0	0.0	10.8	0.6	0.6	12.3	1.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.6	0.0	3.1	0.0	0.0	9.1	2.9	3.0	0.3	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.4	41.0	0.0	46.0	0.0	0.0	48.7	6.9	6.9	60.6	2.3	0.0
LnGrp LOS	D	D		D			D	A	A	E	A	
Approach Vol, veh/h		123			121			1423			882	
Approach Delay, s/veh		41.2			46.0			27.0			3.1	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	73.3		19.4	28.1	52.5		19.4				
Change Period (Y+Rc), s	6.0	5.0		7.5	6.0	5.0		7.5				
Max Green Setting (Gmax), s	6.0	55.0		20.5	24.0	37.0		20.5				
Max Q Clear Time (g_c+I1), s	2.6	10.3		6.4	21.2	4.4		11.6				
Green Ext Time (p_c), s	0.0	5.4		0.4	0.8	7.3		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.3	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Future Volume (veh/h)	0	0	0	1300	160	0	1100	780	160	0	710
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0
Lane Width Adj.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)			1.00		1.00	1.00		1.00	1.00	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No	
Adj Sat Flow, veh/h/ln			0	1885	1885	0	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h			0	1405	0	0	1189	843	173	173	0
Peak Hour Factor			0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %			0	1	1	0	1	1	1	1	1
Cap, veh/h			0	2898		0	2898	1293	247	247	
Arrive On Green			0.00	0.81	0.00	0.00	0.54	0.54	0.07	0.07	0.00
Sat Flow, veh/h			0	3676	1598	0	3676	1598	3483	3483	1598
Grp Volume(v), veh/h			0	1405	0	0	1189	843	173	173	0
Grp Sat Flow(s),veh/h/ln			0	1791	1598	0	1791	1598	1742	1742	1598
Q Serve(g_s), s			0.0	12.3	0.0	0.0	19.5	37.4	4.9	4.9	0.0
Cycle Q Clear(g_c), s			0.0	12.3	0.0	0.0	19.5	37.4	4.9	4.9	0.0
Prop In Lane			0.00		1.00	0.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h			0	2898		0	2898	1293	247	247	
V/C Ratio(X)			0.00	0.48		0.00	0.41	0.65	0.70	0.70	
Avail Cap(c_a), veh/h			0	2898		0	2898	1293	488	488	
HCM Platoon Ratio			1.00	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)			0.00	0.85	0.00	0.00	0.55	0.55	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	3.0	0.0	0.0	8.8	12.9	45.4	45.4	0.0
Incr Delay (d2), s/veh			0.0	0.5	0.0	0.0	0.2	1.4	3.6	3.6	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	3.0	0.0	0.0	8.3	14.6	2.2	2.2	0.0
Unsig. Movement Delay, s/veh											
LnGrp Delay(d), s/veh			0.0	3.5	0.0	0.0	9.1	14.4	49.0	49.0	0.0
LnGrp LOS				A			A	B	D	D	
Approach Vol, veh/h				1405			2032		173	173	
Approach Delay, s/veh				3.5			11.3		49.0	49.0	
Approach LOS				A			B		D	D	

Timer - Assigned Phs	2		4		6						
Phs Duration (G+Y+Rc), s	85.9		14.1		85.9						
Change Period (Y+Rc), s	5.0		7.0		5.0						
Max Green Setting (Gmax), s	74.0		14.0		74.0						
Max Q Clear Time (g_c+I1), s	39.4		6.9		14.3						
Green Ext Time (p_c), s	17.8		0.3		16.8						

Intersection Summary											
HCM 7th Control Delay, s/veh		10.1									
HCM 7th LOS		B									

Notes

Unsignalized Delay for [NER, SER] is excluded from calculations of the approach delay and intersection delay.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Future Volume (veh/h)	550	1180	250	120	1110	60	240	70	90	50	70	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1302	276	132	1224	66	265	77	99	55	77	629
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	694	1790	379	162	1558	84	407	223	287	190	247	476
Arrive On Green	0.20	0.42	0.42	0.09	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	3456	4219	894	1781	4959	267	1439	743	955	463	823	1585
Grp Volume(v), veh/h	607	1050	528	132	840	450	265	0	176	132	0	629
Grp Sat Flow(s),veh/h/ln	1728	1702	1709	1781	1702	1822	720	0	1698	1287	0	1585
Q Serve(g_s), s	17.0	25.7	25.7	7.3	22.5	22.5	18.3	0.0	8.1	3.6	0.0	30.0
Cycle Q Clear(g_c), s	17.0	25.7	25.7	7.3	22.5	22.5	30.0	0.0	8.1	11.7	0.0	30.0
Prop In Lane	1.00		0.52	1.00		0.15	1.00		0.56	0.42		1.00
Lane Grp Cap(c), veh/h	694	1444	725	162	1069	573	407	0	510	437	0	476
V/C Ratio(X)	0.87	0.73	0.73	0.82	0.79	0.79	0.65	0.00	0.35	0.30	0.00	1.32
Avail Cap(c_a), veh/h	812	1444	725	187	1069	573	407	0	510	437	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	24.0	24.0	44.6	31.2	31.2	40.9	0.0	27.3	28.5	0.0	35.0
Incr Delay (d2), s/veh	8.0	2.7	5.3	21.2	5.8	10.4	3.7	0.0	0.4	0.4	0.0	159.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	10.5	11.1	4.1	9.9	11.3	3.4	0.0	3.3	2.6	0.0	32.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.8	26.7	29.3	65.9	37.0	41.6	44.6	0.0	27.7	28.9	0.0	194.4
LnGrp LOS	D	C	C	E	D	D	D		C	C		F
Approach Vol, veh/h		2185			1422			441			761	
Approach Delay, s/veh		32.9			41.2			37.9			165.7	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.6	36.4		36.0	16.6	47.4		36.0				
Change Period (Y+Rc), s	7.5	5.0		6.0	7.5	5.0		6.0				
Max Green Setting (Gmax), s	23.5	28.0		30.0	10.5	41.0		30.0				
Max Q Clear Time (g_c+I1), s	19.0	24.5		32.0	9.3	27.7		32.0				
Green Ext Time (p_c), s	1.1	2.5		0.0	0.0	8.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	56.8
HCM 7th LOS	E

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Future Volume (veh/h)	600	750	0	0	800	230	0	0	0	170	0	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	676	845	0	0	901	259	0	0	0	127	0	541
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	768	2462	0	0	1423	635	0	369	0	423	0	625
Arrive On Green	0.22	0.69	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	3456	3647	0	0	3647	1585	0	1870	0	1781	0	3170
Grp Volume(v), veh/h	676	845	0	0	901	259	0	0	0	127	0	541
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1585	0	1870	0	1781	0	1585
Q Serve(g_s), s	18.9	9.6	0.0	0.0	20.4	11.7	0.0	0.0	0.0	6.2	0.0	16.5
Cycle Q Clear(g_c), s	18.9	9.6	0.0	0.0	20.4	11.7	0.0	0.0	0.0	6.2	0.0	16.5
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	768	2462	0	0	1423	635	0	369	0	423	0	625
V/C Ratio(X)	0.88	0.34	0.00	0.00	0.63	0.41	0.00	0.00	0.00	0.30	0.00	0.87
Avail Cap(c_a), veh/h	898	2462	0	0	1423	635	0	430	0	482	0	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.74	0.74	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	6.2	0.0	0.0	24.1	21.5	0.0	0.0	0.0	34.7	0.0	38.8
Incr Delay (d2), s/veh	9.0	0.4	0.0	0.0	1.6	1.4	0.0	0.0	0.0	0.4	0.0	9.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	3.3	0.0	0.0	8.6	4.5	0.0	0.0	0.0	2.7	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.6	6.6	0.0	0.0	25.7	22.9	0.0	0.0	0.0	35.1	0.0	48.4
LnGrp LOS	D	A			C	C				D		D
Approach Vol, veh/h		1521			1160			0			668	
Approach Delay, s/veh		24.4			25.1			0.0			45.8	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.2	45.0		25.7		74.3		25.7				
Change Period (Y+Rc), s	7.0	5.0		6.0		5.0		6.0				
Max Green Setting (Gmax), s	26.0	33.0		23.0		66.0		23.0				
Max Q Clear Time (g_c+I1), s	20.9	22.4		0.0		11.6		18.5				
Green Ext Time (p_c), s	1.3	5.2		0.0		7.4		1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			28.9									
HCM 7th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Future Volume (veh/h)	0	0	0	130	1	20	0	1030	170	20	890	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	146	1	23	0	1160	191	23	1002	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	0
Cap, veh/h	0	233	0	248	1	276	2	1938	318	88	2659	0
Arrive On Green	0.00	0.00	0.00	0.13	0.13	0.13	0.00	1.00	1.00	0.05	0.75	0.00
Sat Flow, veh/h	0	1856	0	1399	10	1572	1767	3032	497	1767	3618	0
Grp Volume(v), veh/h	0	0	0	147	0	23	0	672	679	23	1002	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1409	0	1572	1767	1763	1766	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	10.2	0.0	1.2	0.0	0.0	0.0	1.3	9.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.2	0.0	1.2	0.0	0.0	0.0	1.3	9.8	0.0
Prop In Lane	0.00		0.00	0.99		1.00	1.00		0.28	1.00		0.00
Lane Grp Cap(c), veh/h	0	233	0	249	0	276	2	1127	1129	88	2659	0
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.08	0.00	0.60	0.60	0.26	0.38	0.00
Avail Cap(c_a), veh/h	0	399	0	375	0	417	115	1127	1129	115	2659	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.09	0.09	0.92	0.92	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.7	0.0	34.5	0.0	0.0	0.0	45.7	4.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.1	0.0	0.2	0.2	1.4	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.7	0.0	0.5	0.0	0.1	0.1	0.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.9	0.0	34.6	0.0	0.2	0.2	47.1	4.6	0.0
LnGrp LOS				D		C		A	A	D	A	
Approach Vol, veh/h		0			170			1351			1025	
Approach Delay, s/veh		0.0			43.5			0.2			5.6	
Approach LOS					D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	69.4		19.1	0.0	80.9		19.1				
Change Period (Y+Rc), s	6.5	5.5		6.5	6.5	5.5		6.5				
Max Green Setting (Gmax), s	6.5	53.5		21.5	6.5	53.5		21.5				
Max Q Clear Time (g_c+I1), s	3.3	2.0		0.0	0.0	11.8		12.2				
Green Ext Time (p_c), s	0.0	14.0		0.0	0.0	9.2		0.5				

Intersection Summary			
HCM 7th Control Delay, s/veh		5.3	
HCM 7th LOS		A	

HCM 7th Edition methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Future Volume (veh/h)	10	0	10	20	10	50	10	650	0	0	700	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h	11	0	11	23	11	56	11	732	0	0	788	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	0	0	1	1
Cap, veh/h	228	16	80	173	23	96	116	1116	0	0	1042	74
Arrive On Green	0.10	0.00	0.10	0.10	0.10	0.10	0.60	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	657	166	824	364	238	991	8	1863	0	0	1739	124
Grp Volume(v), veh/h	22	0	0	90	0	0	743	0	0	0	0	844
Grp Sat Flow(s),veh/h/ln	1648	0	0	1592	0	0	1871	0	0	0	0	1863
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.8	0.0	0.0	8.6	0.0	0.0	0.0	0.0	10.9
Prop In Lane	0.50		0.50	0.26		0.62	0.01		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	324	0	0	292	0	0	1231	0	0	0	0	1116
V/C Ratio(X)	0.07	0.00	0.00	0.31	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.76
Avail Cap(c_a), veh/h	847	0	0	856	0	0	2082	0	0	0	0	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	0.0	14.2	0.0	0.0	4.4	0.0	0.0	0.0	0.0	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.6	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.7	0.0	0.0	14.8	0.0	0.0	4.8	0.0	0.0	0.0	0.0	5.9
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		22			90			743			844	
Approach Delay, s/veh		13.7			14.8			4.8			5.9	
Approach LOS		B			B			A			A	

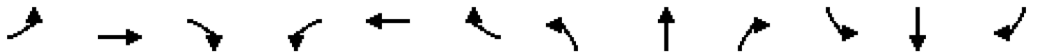
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	24.7	8.2	24.7	8.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	35.0	15.0	35.0	15.0
Max Q Clear Time (g_c+I1), s	10.6	2.4	12.9	3.8
Green Ext Time (p_c), s	5.9	0.0	6.8	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	6.0
HCM 7th LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	260	170	480	250	180	480
Future Volume (veh/h)	260	170	480	250	180	480
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	290	189	535	279	201	535
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	371	330	686	911	251	1127
Arrive On Green	0.21	0.21	0.37	0.37	0.14	0.60
Sat Flow, veh/h	1781	1585	1870	1585	1781	1870
Grp Volume(v), veh/h	290	189	535	279	201	535
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1870
Q Serve(g_s), s	8.1	5.7	13.4	4.8	5.8	8.4
Cycle Q Clear(g_c), s	8.1	5.7	13.4	4.8	5.8	8.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	371	330	686	911	251	1127
V/C Ratio(X)	0.78	0.57	0.78	0.31	0.80	0.47
Avail Cap(c_a), veh/h	540	481	1063	1231	304	1559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	18.8	14.8	5.8	22.0	5.8
Incr Delay (d2), s/veh	4.6	1.6	2.0	0.2	12.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.0	5.2	2.2	3.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.3	20.4	16.8	6.0	34.0	6.2
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	479		814			736
Approach Delay, s/veh	22.8		13.1			13.8
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.4	24.4				36.8	16.0
Change Period (Y+Rc), s	5.0	5.0				5.0	5.0
Max Green Setting (Gmax), s	9.0	30.0				44.0	16.0
Max Q Clear Time (g_c+I1), s	7.8	15.4				10.4	10.1
Green Ext Time (p_c), s	0.1	4.0				3.9	0.9

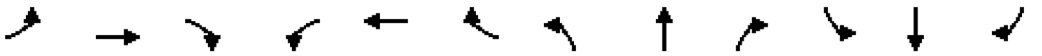
Intersection Summary							
HCM 7th Control Delay, s/veh			15.6				
HCM 7th LOS			B				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Future Volume (veh/h)	290	30	230	0	0	0	220	510	0	10	420	270
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	0.92	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	334	35	265				253	587	0	12	483	311
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	397	46	346				460	1206	0	53	909	785
Arrive On Green	0.24	0.24	0.24				0.09	0.65	0.00	0.50	0.50	0.50
Sat Flow, veh/h	1639	188	1425				1781	1870	0	15	1837	1585
Grp Volume(v), veh/h	334	0	300				253	587	0	495	0	311
Grp Sat Flow(s),veh/h/ln	1639	0	1614				1781	1870	0	1852	0	1585
Q Serve(g_s), s	15.5	0.0	13.8				5.2	13.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	15.5	0.0	13.8				5.2	13.0	0.0	14.5	0.0	9.9
Prop In Lane	1.00		0.88				1.00		0.00	0.02		1.00
Lane Grp Cap(c), veh/h	397	0	391				460	1206	0	963	0	785
V/C Ratio(X)	0.84	0.00	0.77				0.55	0.49	0.00	0.51	0.00	0.40
Avail Cap(c_a), veh/h	512	0	504				460	1206	0	963	0	785
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	0.00	0.79	0.00	0.79
Uniform Delay (d), s/veh	28.8	0.0	28.2				9.9	7.3	0.0	13.9	0.0	12.7
Incr Delay (d2), s/veh	9.6	0.0	5.3				1.4	1.4	0.0	1.6	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	5.7				1.9	4.7	0.0	6.0	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.4	0.0	33.4				11.3	8.8	0.0	15.4	0.0	13.9
LnGrp LOS	D		C				B	A		B		B
Approach Vol, veh/h		634						840			806	
Approach Delay, s/veh		36.1						9.5			14.8	
Approach LOS		D						A			B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		56.6		23.4	12.0	44.6						
Change Period (Y+Rc), s		5.0		4.0	5.0	5.0						
Max Green Setting (Gmax), s		46.0		25.0	7.0	34.0						
Max Q Clear Time (g_c+I1), s		15.0		17.5	7.2	16.5						
Green Ext Time (p_c), s		4.4		1.9	0.0	4.1						

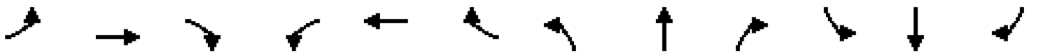
Intersection Summary												
HCM 7th Control Delay, s/veh			18.8									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Future Volume (veh/h)	20	270	340	160	290	80	330	340	190	80	350	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	304	383	180	327	90	372	383	214	90	394	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	337	306	303	523	144	437	636	539	118	517	14
Arrive On Green	0.19	0.19	0.19	0.10	0.37	0.37	0.25	0.34	0.34	0.07	0.15	0.15
Sat Flow, veh/h	66	1743	1585	1781	1412	389	1781	1870	1585	1781	3531	98
Grp Volume(v), veh/h	327	0	383	180	0	417	372	383	214	90	198	207
Grp Sat Flow(s),veh/h/ln	1809	0	1585	1781	0	1800	1781	1870	1585	1781	1777	1853
Q Serve(g_s), s	5.9	0.0	13.0	5.1	0.0	12.8	13.4	11.4	6.9	3.3	7.2	7.2
Cycle Q Clear(g_c), s	11.9	0.0	13.0	5.1	0.0	12.8	13.4	11.4	6.9	3.3	7.2	7.2
Prop In Lane	0.07		1.00	1.00		0.22	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	407	0	306	303	0	667	437	636	539	118	260	271
V/C Ratio(X)	0.80	0.00	1.25	0.59	0.00	0.62	0.85	0.60	0.40	0.76	0.76	0.76
Avail Cap(c_a), veh/h	407	0	306	357	0	722	927	834	707	477	317	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	27.1	18.6	0.0	17.3	24.2	18.4	16.9	30.9	27.6	27.6
Incr Delay (d2), s/veh	11.2	0.0	137.0	1.9	0.0	1.5	4.8	0.9	0.5	9.6	8.4	8.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	16.3	2.1	0.0	5.1	5.9	4.7	2.4	1.7	3.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.8	0.0	164.1	20.6	0.0	18.8	29.0	19.3	17.4	40.5	36.0	35.8
LnGrp LOS	D		F	C		B	C	B	B	D	D	D
Approach Vol, veh/h		710			597			969			495	
Approach Delay, s/veh		105.9			19.4			22.6			36.7	
Approach LOS		F			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	27.9	11.9	18.0	22.5	14.9		29.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	6.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	30.0	9.0	13.0	35.0	12.0		27.0				
Max Q Clear Time (g_c+I1), s	5.3	13.4	7.1	15.0	15.4	9.2		14.8				
Green Ext Time (p_c), s	0.1	2.9	0.1	0.0	1.1	0.6		2.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	45.8
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Future Volume (veh/h)	60	0	20	0	0	0	20	820	0	0	860	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	22	0	0	0	22	895	0	0	939	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	0	132	0	117	0	37	1424	0	0	1127	79
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.02	0.76	0.00	0.00	0.65	0.65
Sat Flow, veh/h	1418	0	1585	0	1870	0	1781	1870	0	0	1727	121
Grp Volume(v), veh/h	66	0	22	0	0	0	22	895	0	0	0	1005
Grp Sat Flow(s),veh/h/ln	1418	0	1585	0	1870	0	1781	1870	0	0	0	1849
Q Serve(g_s), s	2.6	0.0	0.7	0.0	0.0	0.0	0.7	12.4	0.0	0.0	0.0	23.5
Cycle Q Clear(g_c), s	2.6	0.0	0.7	0.0	0.0	0.0	0.7	12.4	0.0	0.0	0.0	23.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	215	0	132	0	117	0	37	1424	0	0	0	1206
V/C Ratio(X)	0.31	0.00	0.17	0.00	0.00	0.00	0.60	0.63	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	377	0	312	0	330	0	220	2801	0	0	0	2377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	24.2	0.0	0.0	0.0	27.6	3.1	0.0	0.0	0.0	7.5
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.0	0.0	0.0	14.5	0.5	0.0	0.0	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.3	0.0	0.0	0.0	0.4	1.7	0.0	0.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.0	0.0	24.8	0.0	0.0	0.0	42.1	3.6	0.0	0.0	0.0	9.1
LnGrp LOS	C		C				D	A				A
Approach Vol, veh/h		88			0			917			1005	
Approach Delay, s/veh		26.4			0.0			4.5			9.1	
Approach LOS		C						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		48.2		8.5	6.2	42.0		8.5				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		85.0		10.0	7.0	73.0		10.0				
Max Q Clear Time (g_c+I1), s		14.4		4.6	2.7	25.5		0.0				
Green Ext Time (p_c), s		9.3		0.1	0.0	11.6		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	7.7
HCM 7th LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	80	70	730	90	70	770
Future Volume (veh/h)	80	70	730	90	70	770
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	78	814	100	78	858
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	182	162	1116	137	397	1278
Arrive On Green	0.10	0.10	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1781	1585	1634	201	611	1870
Grp Volume(v), veh/h	89	78	0	914	78	858
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1834	611	1870
Q Serve(g_s), s	2.0	1.9	0.0	13.2	3.9	11.3
Cycle Q Clear(g_c), s	2.0	1.9	0.0	13.2	17.1	11.3
Prop In Lane	1.00	1.00		0.11	1.00	
Lane Grp Cap(c), veh/h	182	162	0	1253	397	1278
V/C Ratio(X)	0.49	0.48	0.00	0.73	0.20	0.67
Avail Cap(c_a), veh/h	658	586	0	2864	933	2921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	17.8	0.0	4.2	9.6	3.9
Incr Delay (d2), s/veh	2.0	2.2	0.0	0.8	0.2	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.7	0.0	1.7	0.4	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.8	20.0	0.0	5.0	9.8	4.5
LnGrp LOS	B	B		A	A	A
Approach Vol, veh/h	167		914			936
Approach Delay, s/veh	19.9		5.0			4.9
Approach LOS	B		A			A

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	33.2				33.2	8.8
Change Period (Y+Rc), s	4.5				4.5	4.5
Max Green Setting (Gmax), s	65.5				65.5	15.5
Max Q Clear Time (g_c+I1), s	15.2				19.1	4.0
Green Ext Time (p_c), s	9.7				9.6	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	6.2
HCM 7th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

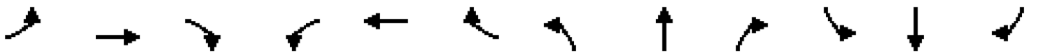
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Future Volume (veh/h)	200	0	60	0	0	0	70	520	0	0	530	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	0	1856	1856	1856	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	225	0	68	0	0	0	79	586	0	0	597	0
Peak Hour Factor	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	3	3	3	0	3	3	3	3	3	3	3	0
Cap, veh/h	471	0	279	0	330	0	146	762	0	0	978	0
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	1767	0	1572	0	1856	0	110	1445	0	0	1856	0
Grp Volume(v), veh/h	225	0	68	0	0	0	665	0	0	0	597	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572	0	1856	0	1555	0	0	0	1856	0
Q Serve(g_s), s	5.5	0.0	1.7	0.0	0.0	0.0	6.4	0.0	0.0	0.0	10.3	0.0
Cycle Q Clear(g_c), s	5.5	0.0	1.7	0.0	0.0	0.0	16.6	0.0	0.0	0.0	10.3	0.0
Prop In Lane	1.00		1.00	0.00		0.00	0.12		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	471	0	279	0	330	0	908	0	0	0	978	0
V/C Ratio(X)	0.48	0.00	0.24	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.61	0.00
Avail Cap(c_a), veh/h	968	0	722	0	872	0	1661	0	0	0	1845	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	16.2	0.0	0.0	0.0	8.7	0.0	0.0	0.0	7.5	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.4	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.6	0.0	0.0	0.0	3.5	0.0	0.0	0.0	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.5	0.0	16.6	0.0	0.0	0.0	9.8	0.0	0.0	0.0	8.2	0.0
LnGrp LOS	B		B				A				A	
Approach Vol, veh/h		293			0			665			597	
Approach Delay, s/veh		18.0			0.0			9.8			8.2	
Approach LOS		B						A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.6		14.1		31.6		14.1				
Change Period (Y+Rc), s		7.5		6.0		7.5		* 6				
Max Green Setting (Gmax), s		45.5		21.0		45.5		* 22				
Max Q Clear Time (g_c+I1), s		18.6		7.5		12.3		0.0				
Green Ext Time (p_c), s		5.5		0.8		4.5		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.7
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Future Volume (veh/h)	5	0	5	1	0	0	5	550	0	0	550	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	0	6	1	0	0	6	613	0	0	613	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	151	0	20	216	0	0	91	1348	0	0	1339	13
Arrive On Green	0.03	0.00	0.03	0.03	0.00	0.00	0.73	0.73	0.00	0.00	0.73	0.73
Sat Flow, veh/h	746	0	746	1506	0	0	4	1847	0	0	1834	18
Grp Volume(v), veh/h	12	0	0	1	0	0	619	0	0	0	0	619
Grp Sat Flow(s),veh/h/ln	1491	0	0	1506	0	0	1851	0	0	0	0	1852
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	5.6
Prop In Lane	0.50		0.50	1.00		0.00	0.01		0.00	0.00		0.01
Lane Grp Cap(c), veh/h	171	0	0	216	0	0	1439	0	0	0	0	1352
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.46
Avail Cap(c_a), veh/h	565	0	0	586	0	0	1439	0	0	0	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	0.0	19.5	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	0.0	19.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	2.5
LnGrp LOS	B			B			A					A
Approach Vol, veh/h		12			1			619			619	
Approach Delay, s/veh		19.8			19.5			2.5			2.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		5.1		36.0		5.1				
Change Period (Y+Rc), s		6.0		4.0		6.0		4.0				
Max Green Setting (Gmax), s		30.0		12.0		30.0		12.0				
Max Q Clear Time (g_c+I1), s		7.6		2.3		7.6		2.0				
Green Ext Time (p_c), s		4.4		0.0		4.4		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			2.7									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	660	5	20	740	5	20
Future Vol, veh/h	660	5	20	740	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	768	6	23	861	6	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	773	0	1678	771
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	907	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	842	-	104	400
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	394	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	842	-	99	400
Mov Cap-2 Maneuver	-	-	-	-	99	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	373	-

Approach	SE	NW	NE
HCM Control Delay, s/v	0	0.25	21.38
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	249	47	-	-	-
HCM Lane V/C Ratio	0.117	0.028	-	-	-
HCM Control Delay (s/veh)	21.4	9.4	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	20	700	650	50	30	40
Future Vol, veh/h	20	700	650	50	30	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	814	756	58	35	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1646	785
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	861	-
Critical Hdwy	4.12	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3	3
Pot Cap-1 Maneuver	813	-	-	-	142	442
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	813	-	-	-	135	442
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	460	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0.27	0	30.09
HCM LOS			D

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	50	-	223
HCM Lane V/C Ratio	-	-	0.029	-	0.365
HCM Control Delay (s/veh)	-	-	9.6	0	30.1
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0.1	-	1.6

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Future Vol, veh/h	10	5	10	10	5	40	5	750	10	20	760	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	6	12	12	6	47	6	872	12	23	884	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1852	1861	919	1823	1890	878	954	0	0	884	0	0
Stage 1	965	965	-	890	890	-	-	-	-	-	-	-
Stage 2	887	896	-	933	1000	-	-	-	-	-	-	-
Critical Hdwy	6	6	6.22	6	6	6	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.5	5.52	-	5.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3.318	3	3	3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	106	329	112	102	392	721	-	-	765	-	-
Stage 1	400	398	-	436	434	-	-	-	-	-	-	-
Stage 2	438	431	-	415	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	98	329	94	94	392	721	-	-	765	-	-
Mov Cap-2 Maneuver	82	98	-	94	94	-	-	-	-	-	-	-
Stage 1	373	371	-	430	427	-	-	-	-	-	-	-
Stage 2	375	425	-	368	357	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	43.13	29.5	0.07	0.23
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	12	-	-	123	210	42	-	-
HCM Lane V/C Ratio	0.008	-	-	0.237	0.305	0.03	-	-
HCM Control Delay (s/veh)	10	0	-	43.1	29.5	9.9	0	-
HCM Lane LOS	B	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	1.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	1017	1078	1608	-	-	0
Stage 1	1017	-	-	-	-	0
Stage 2	-	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1017	1078	1608	-	-	-
Mov Cap-2 Maneuver	1017	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1608	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	0	-	0	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0	-	-	-

Part 10: Traffic Signal Warrant Analysis

HCS Warrants Report

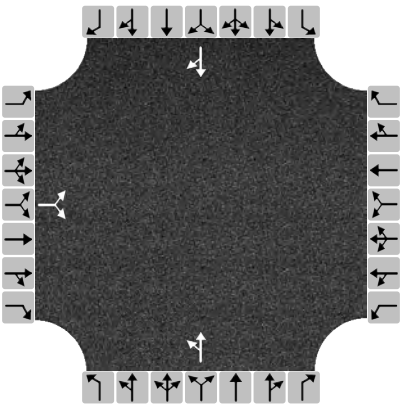
Project Information

Analyst	Seth	Date	1/23/2024
Agency	CTPS	Analysis Year	2024
Jurisdiction	MassDOT District 6	Time Period Analyzed	
Project Description	Route 37 Priority Corridor Study: Franklin Street and JW Leroy Way		

General

Major Street Direction	North-South	Population < 10,000	No
Starting Time Interval	6	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	3
Major Street Speed (mi/h)	30	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	1900		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	0	0	0	0	0	0	1	0	0	1	0
Lane Usage		LR						LT			TR	
Vehicle Volumes Averages (veh/h)	17	0	69	0	0	0	17	584	0	0	37	497
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	10.7			0.0			3.1			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	1

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	4
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)	-	Tractor-Trailer Trucks (%)	10

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (80%)	4A (100%)	4B (80%)
07 - 08	786	49	835	0	0	No	No	No	No	No	No	No	No	No
08 - 09	1230	290	1520	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
09 - 10	1302	40	1342	0	0	No	No	No	No	No	No	No	No	No
10 - 11	942	25	967	0	0	No	No	No	No	No	No	No	No	No
11 - 12	875	42	917	0	0	No	No	No	No	No	No	No	No	No
12 - 13	981	49	1030	0	0	No	No	No	No	No	No	No	No	No
13 - 14	974	26	1000	0	0	No	No	No	No	No	No	No	No	No
14 - 15	1106	100	1206	0	0	No	No	Yes	Yes	Yes	No	No	No	No
15 - 16	1258	158	1416	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	1448	75	1523	0	0	No	No	Yes	Yes	No	No	No	No	No
17 - 18	1450	100	1550	0	0	No	No	Yes	Yes	Yes	No	No	No	No
18 - 19	1300	88	1388	0	0	No	No	Yes	Yes	Yes	No	No	No	No
Total	13652	1042	14694	0	0	2	2	6	6	5	0	2	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume	
A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	
Warrant 2: Four-Hour Vehicular Volume	✔
Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
Warrant 3: Peak Hour	✔
A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 4: Pedestrian Volume	
A. Four Hour Volumes --or--	
B. One-Hour Volumes	
Warrant 5: School Crossing	
Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	✓
Warrant 6: Coordinated Signal System	
Degree of Platooning (Predominant direction or both directions)	
Warrant 7: Crash Experience	
A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	
Warrant 8: Roadway Network	
A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	
Warrant 9: Grade Crossing	
A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

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HCS Warrants Report

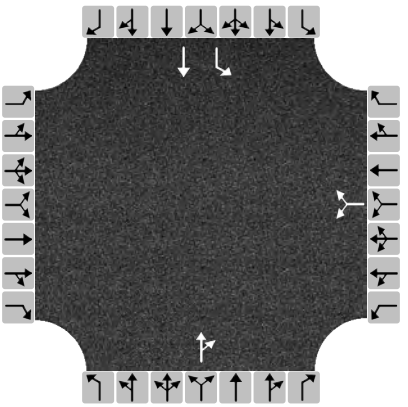
Project Information

Analyst	Seth Asante	Date	12/15/2023
Agency	CTPS	Analysis Year	2023
Jurisdiction	MassDOT District 6	Time Period Analyzed	Hour
Project Description	Route 37 Priority Corridor Study: Washington Street at Peach Street Intersection		

General

Major Street Direction	North-South	Population < 10,000	No
Starting Time Interval	6	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	2
Major Street Speed (mi/h)	30	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	0		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	0	0	0	0	0	0	1	0	1	1	0
Lane Usage					LR			TR		L	T	
Vehicle Volumes Averages (veh/h)	0	0	0	186	0	0	0	0	748	0	629	0
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			64.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	2

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	4
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)	-	Tractor-Trailer Trucks (%)	10

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (80%)	4A (100%)	4B (80%)
06 - 07	713	116	829	0	0	No	No	No	No	No	No	No	No	No
07 - 08	1194	220	1414	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
08 - 09	1666	204	1870	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
09 - 10	1611	124	1735	0	0	No	Yes	Yes	Yes	Yes	No	No	No	No
10 - 11	1196	119	1315	0	0	No	No	Yes	Yes	Yes	No	No	No	No
11 - 12	1133	136	1269	0	0	No	Yes	Yes	Yes	Yes	No	No	No	No
12 - 13	1189	131	1320	0	0	No	Yes	Yes	Yes	Yes	No	No	No	No
13 - 14	1287	230	1517	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
14 - 15	1311	228	1539	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
15 - 16	1628	257	1885	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	1765	271	2036	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
17 - 18	1837	206	2043	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Total	16530	2242	18772	0	0	7	10	11	11	11	0	6	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume	✔
A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	✓
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 2: Four-Hour Vehicular Volume	✔
Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
Warrant 3: Peak Hour	✔
A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 4: Pedestrian Volume	
A. Four Hour Volumes --or--	
B. One-Hour Volumes	
Warrant 5: School Crossing	
Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	
Warrant 6: Coordinated Signal System	
Degree of Platooning (Predominant direction or both directions)	
Warrant 7: Crash Experience	
A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	✓
Warrant 8: Roadway Network	
A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	
Warrant 9: Grade Crossing	
A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

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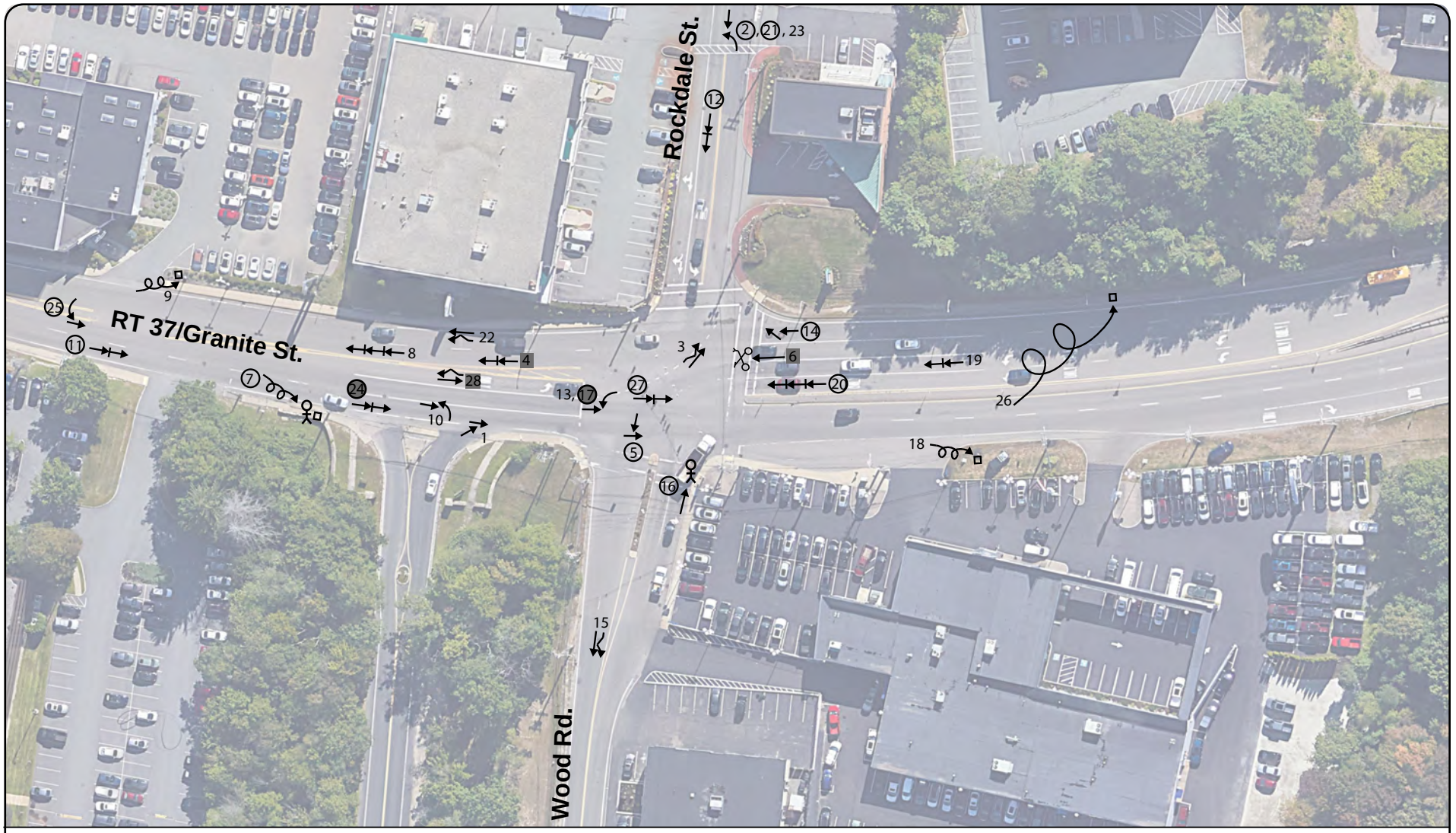
Appendix E Traffic Safety Data

1: Crashes 2016–20



BOSTON REGION MPO

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FIGURE 1
Collision Diagram: RT 37/Granite St. at Rockdale St. and Wood Rd.
Police Crash Reports 2016-20

Route 37 Priority Corridor Stud
Braintree, Massachusetts

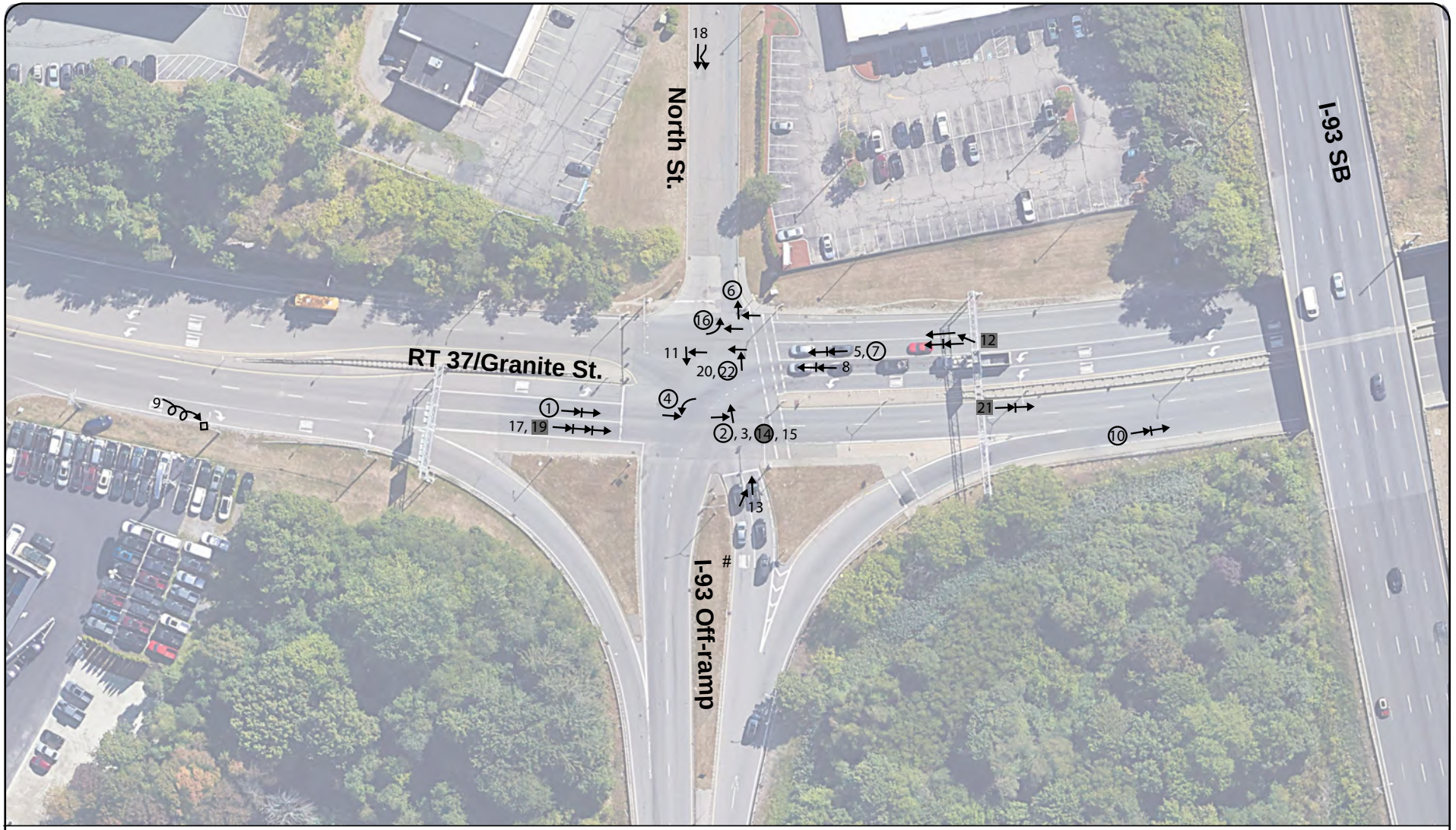
Lorem ipsu

Route 37 at Wood Rd./Rockdale St
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2016-06-20	Mon	2:59 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Slowing or stopped in traffic / Turning right	Collision with motor vehicle in traffic	No improper driving / Inattention / Failed to yield right of way
2	2016-08-29	Mon	4:41 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left / Not reported	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
3	2017-01-04	Wed	1:12 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Cloudy	Turning left	Collision with other movable object	No improper driving / Failure to keep in proper lane or running off road
4	2017-03-01	Wed	7:05 AM		2	0	Property damage only	Rear-end	Dry	Dawn	Cloudy	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Inattention / No improper driving
5	2017-04-12	Wed	10:22 AM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Other improper action
6	2017-05-16	Tue	10:07 PM		1	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with other movable object	No improper driving
7	2017-05-19	Fri	11:05 AM		1	1	Non-fatal injury	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with utility pole	Other improper action / Failure to keep in proper lane or running off road
8	2017-06-26	Mon	2:55 PM		3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Inattention / No improper driving
9	2017-07-10	Mon	5:22 PM		2	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Entering traffic lane / Travelling straight ahead	Collision with light pole or other post/support	No improper driving / Unknown / Failed to yield right of way
10	2017-07-17	Mon	12:59 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
11	2017-09-13	Wed	4:46 PM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	Inattention / No improper driving
12	2017-09-28	Thu	5:37 PM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Glare / No improper driving
13	2017-12-10	Sun	10:28 AM		2	0	Not reported	Angle	Dry	Daylight	Clear	Not reported	Not reported	Not reported
14	2018-01-06	Sat	4:00 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Failure to keep in proper lane or running off road
15	2018-06-03	Sun	11:52 AM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Unknown / Visibility obstructed
16	2018-08-01	Wed	4:52 PM		1	1	Non-fatal injury	Single vehicle crash	Dry	Daylight	Clear	Turning right	Collision with pedestrian	No improper driving / Unknown
17	2018-10-20	Sat	8:24 PM		2	2	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown
18	2019-01-14	Mon	7:49 AM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with light pole or other post/support	Distracted
19	2019-01-15	Tue	8:34 AM		2	0	Not reported	Rear-end	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Followed too closely / Inattention
20	2019-05-06	Mon	3:30 PM		3	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Illness / No improper driving
21	2019-06-13	Thu	5:48 PM		2	2	Non-fatal injury	Angle	Wet	Daylight	Rain	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic / Collision with other movable object	Driving too fast for conditions / No improper driving
22	2019-06-26	Wed	8:15 AM		3	0	Not reported	Sideswipe, same direction	Dry	Daylight	Cloudy	Travelling straight ahead / Changing lanes	Collision with motor vehicle in traffic	No improper driving / Inattention / Failed to yield right of way
23	2019-08-06	Tue	5:31 PM		2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	Made an improper turn / No improper driving
24	2019-09-23	Mon	6:22 PM		2	1	Non-fatal injury	Rear-end	Dry	Dusk	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / No improper driving
25	2020-08-05	Wed	1:30 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving

Route 37 at Wood Rd./Rockdale St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

26	2020-11-27	Fri	9:35 AM	1	0	Property damage only	Single vehicle crash	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Distracted
27	2020-12-09	Wed	10:11 AM	2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Making U-turn / Travelling straight ahead	Collision with motor vehicle in traffic	Made an improper turn / Unknown
28	2020-12-23	Wed	5:59 PM	2	4	Non-fatal injury	Sideswipe, opposite direction	Dry	Dark - lighted roadway	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Failed to yield right of way



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

#, (#), (#), #

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- #, Nighttime Crash Index Number

BOSTON REGION MPO

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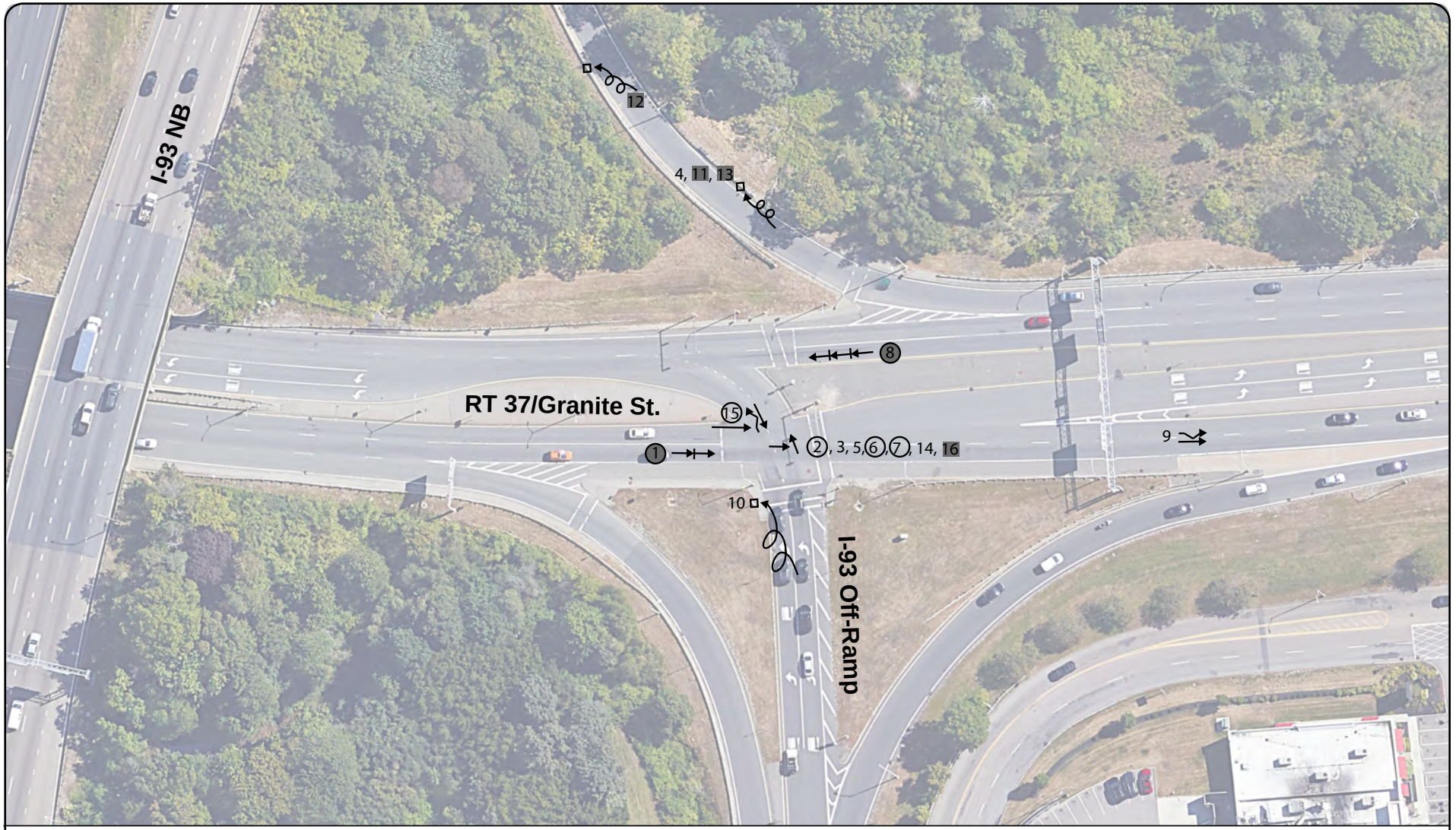
FIGURE 2
Collision Diagram: RT 37/Granite St. at I-93 SB and North St.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at I-93 SB Ramps
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2016-01-04	Mon	2:26 PM		2	1	Non-fatal injury	Rear-end	Wet	Daylight	Cloudy / Snow	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
2	2016-01-06	Wed	12:49 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / Unknown
3	2016-01-26	Tue	11:31 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
4	2016-03-10	Thu	6:06 AM		2	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
5	2016-04-26	Tue	7:50 AM		2	0	Property damage only	Rear-end	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
6	2016-05-17	Tue	3:07 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Cloudy	Turning right / Travelling straight ahead	Collision with motor vehicle in traffic	Made an improper turn / No improper driving
7	2016-11-06	Sun	1:37 PM		2	1	Non-fatal injury	Rear-end	Wet	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Followed too closely
8	2017-04-06	Thu	12:34 PM		2	0	Property damage only	Rear-end	Wet	Daylight	Rain / Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving / Distracted
9	2017-06-26	Mon	3:19 PM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with light pole or other post/support	Physical impairment
10	2017-10-26	Thu	2:47 PM		2	1	Non-fatal injury	Rear-end	Wet	Daylight	Rain	Entering traffic lane	Collision with motor vehicle in traffic	No improper driving / Unknown
11	2018-03-08	Thu	4:16 PM		2	0	Property damage only	Angle	Wet	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
12	2018-04-06	Fri	9:35 PM		4	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / Inattention / No improper driving
13	2018-10-11	Thu	2:18 PM		1	0	Property damage only	Angle	Wet	Daylight	Cloudy	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
14	2018-10-27	Sat	8:07 PM		2	1	Non-fatal injury	Angle	Wet	Dark - lighted roadway	Rain	Travelling straight ahead / Turning left	Collision with other movable object	No improper driving / Inattention
15	2019-04-19	Fri	12:35 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
16	2019-06-14	Fri	1:45 PM		2	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention / Disregarded traffic signs, signals, road markings
17	2019-08-02	Fri	11:29 AM		3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
18	2019-08-25	Sun	12:50 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Entering traffic lane / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
19	2019-10-29	Tue	6:52 PM		3	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Cloudy / Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / Unknown / No improper driving
20	2019-10-30	Wed	1:49 PM		2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
21	2020-01-18	Sat	5:33 PM		2	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Snow	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
22	2020-06-22	Mon	2:04 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#) , #,

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- #, Nighttime Crash Index Number

BOSTON REGION MPO

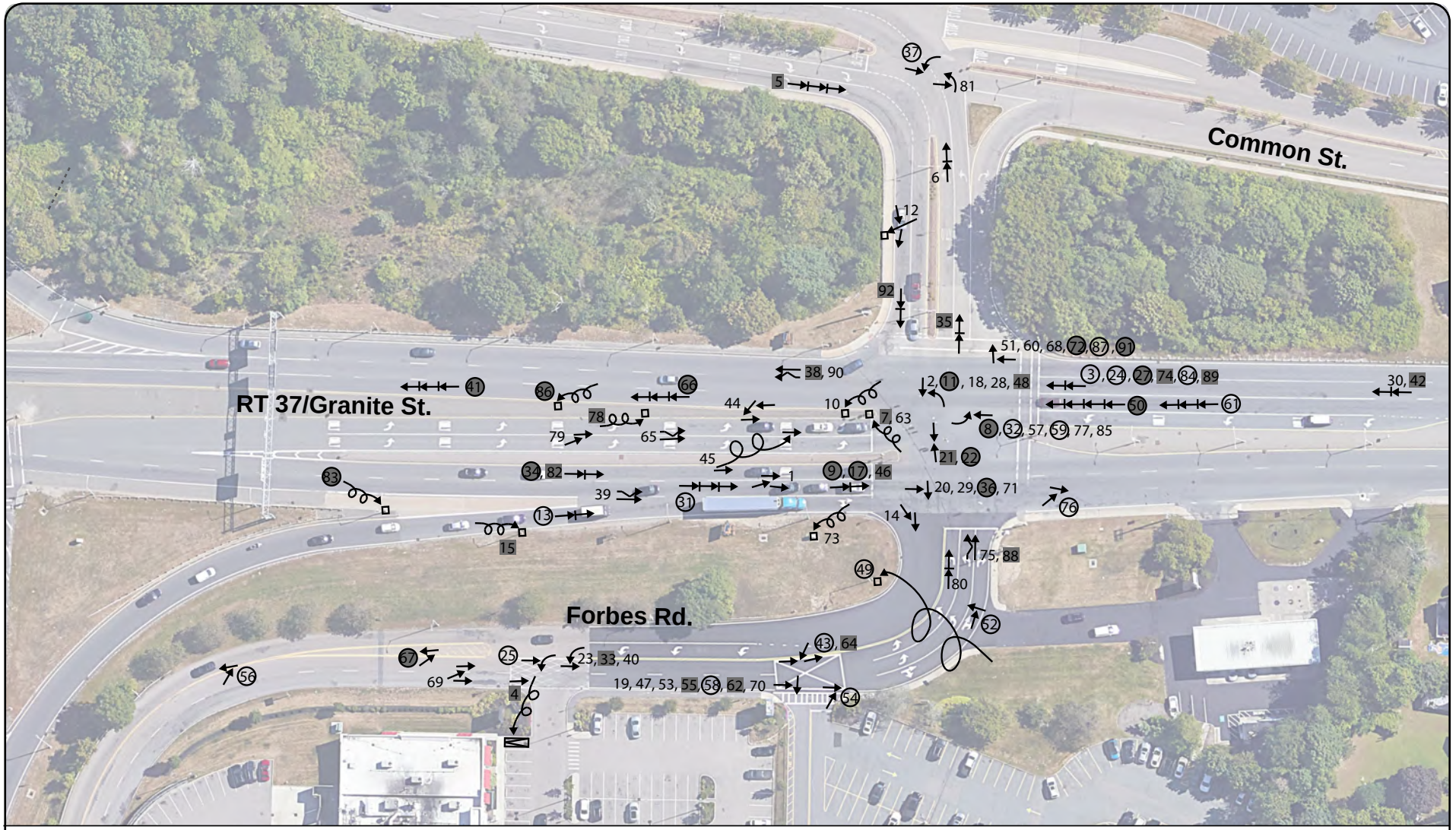
N

FIGURE 3
Collision Diagram: RT 37/Granite St. at I-93 NB
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at I-93 NB Ramps
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2016-01-01	Fri	2:01 AM		2	1	Non-fatal injury	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
2	2016-03-04	Fri	8:19 AM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
3	2016-05-25	Wed	6:51 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Unknown
4	2016-05-26	Thu	5:20 PM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with guardrail	Inattention
5	2016-06-09	Thu	2:54 PM		2	0	Property damage only	Sideswipe, opposite direction	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
6	2016-06-24	Fri	7:44 PM		2	3	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
7	2016-08-19	Fri	6:06 PM		2	4	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown
8	2016-12-14	Wed	10:09 PM		3	4	Non-fatal injury	Rear-end	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Inattention / No improper driving
9	2017-01-10	Tue	4:26 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Changing lanes / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Unknown / No improper driving
10	2018-01-30	Tue	9:02 AM		1	0	Property damage only	Single vehicle crash	Ice	Daylight	Snow	Slowing or stopped in traffic	Collision with light pole or other post/support	No improper driving
11	2018-03-15	Thu	8:40 PM		1	0	Property damage only	Single vehicle crash	Snow	Dark - roadway not lighted	Clear	Travelling straight ahead	Collision with guardrail	Failure to keep in proper lane or running off road
12	2018-04-13	Fri	3:59 AM		1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Not reported	Turning right	Collision with guardrail	No improper driving
13	2018-06-04	Mon	9:20 PM		1	0	Property damage only	Single vehicle crash	Wet	Dark - lighted roadway	Rain	Travelling straight ahead	Collision with guardrail	Driving too fast for conditions
14	2018-06-09	Sat	12:10 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
15	2020-07-11	Sat	10:51 AM		3	3	Non-fatal injury	Sideswipe, opposite direction	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Distracted
16	2020-10-13	Tue	6:34 PM		2	0	Property damage only	Angle	Wet	Dark - lighted roadway	Rain	Slowing or stopped in traffic / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

- # , (#) , (#) , (#)
- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- (#) Nighttime Crash Index Number

BOSTON REGION MPO

N

FIGURE 4
Collision Diagram: RT 37/Granite St. at Forbes St.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at Forbes Rd.
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	01/01/2016	Fri	12:38 PM		3	0	Property damage only	Angle	Dry	Daylight	Cloudy	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Failure to keep in proper lane or running off road / No improper driving / No improper driving
2	01/05/2016	Tue	8:35 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object	No improper driving / Failed to yield right of way / Made an improper turn
3	01/12/2016	Tue	8:34 AM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Followed too closely / No improper driving
4	01/15/2016	Fri	8:07 PM		3	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Turning left / Travelling straight ahead / Parked	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Made an improper turn
5	03/04/2016	Fri	9:31 PM		3	0	Property damage only	Rear-end	Ice	Dark - lighted roadway	Snow / Sleet, hail (freezing rain or drizzle)	Travelling straight ahead	Collision with motor vehicle in traffic	Driving too fast for conditions / Followed too closely / No improper driving
6	05/27/2016	Fri	11:03 AM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Turning left / Changing lanes	Collision with motor vehicle in traffic	No improper driving
7	08/26/2016	Fri	1:55 AM		1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Cloudy	Turning left	Collision with light pole or other post/support	Inattention
8	10/09/2016	Sun	6:35 PM		2	3	Non-fatal injury	Angle	Wet	Dark - lighted roadway	Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
9	10/09/2016	Sun	9:45 PM		2	1	Non-fatal injury	Rear-end	Wet	Dark - lighted roadway	Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Followed too closely / Other improper action
10	10/17/2016	Mon	8:50 AM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with light pole or other post/support	Fatigued/asleep / Failure to keep in proper lane or running off road
11	10/22/2016	Sat	7:20 PM		2	1	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Unknown
12	10/28/2016	Fri	5:15 PM		3	0	Property damage only	Angle	Wet	Daylight	Rain	Travelling straight ahead / Turning right / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Driving too fast for conditions / Over-correcting/over-steering
13	11/16/2016	Wed	4:03 PM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
14	12/20/2016	Tue	9:37 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning right	Collision with motor vehicle in traffic	No improper driving
15	01/13/2017	Fri	6:07 AM		1	1	Non-fatal injury	Single vehicle crash	Wet	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with utility pole	Fatigued/asleep
16	01/14/2017	Sat	10:06 PM		1	0	Not Reported	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with utility pole	Not reported
17	02/07/2017	Tue	4:09 PM		2	1	Non-fatal injury	Rear-end	Wet	Dawn	Rain / Sleet, hail (freezing rain or drizzle)	Slowing or stopped in traffic	Collision with motor vehicle in traffic	Driving too fast for conditions / Followed too closely / No improper driving
18	02/16/2017	Thu	10:10 PM		1	0	Property damage only	Head-on	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	Driving too fast for conditions / Followed too closely / No improper driving
19	03/09/2017	Thu	1:11 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
20	04/02/2017	Sun	3:50 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Visibility obstructed
21	04/19/2017	Wed	3:06 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
22	04/20/2017	Thu	8:10 PM		2	0	Property damage only	Head-on	Dry	Dark - lighted roadway	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
23	05/23/2017	Tue	6:07 PM		2	1	Non-fatal injury	Head-on	Dry	Dawn	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
24	06/07/2017	Wed	12:58 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving

Route 37 at Forbes Road
Crash Data Lookup
MassDOT Crash Data 2016-2020

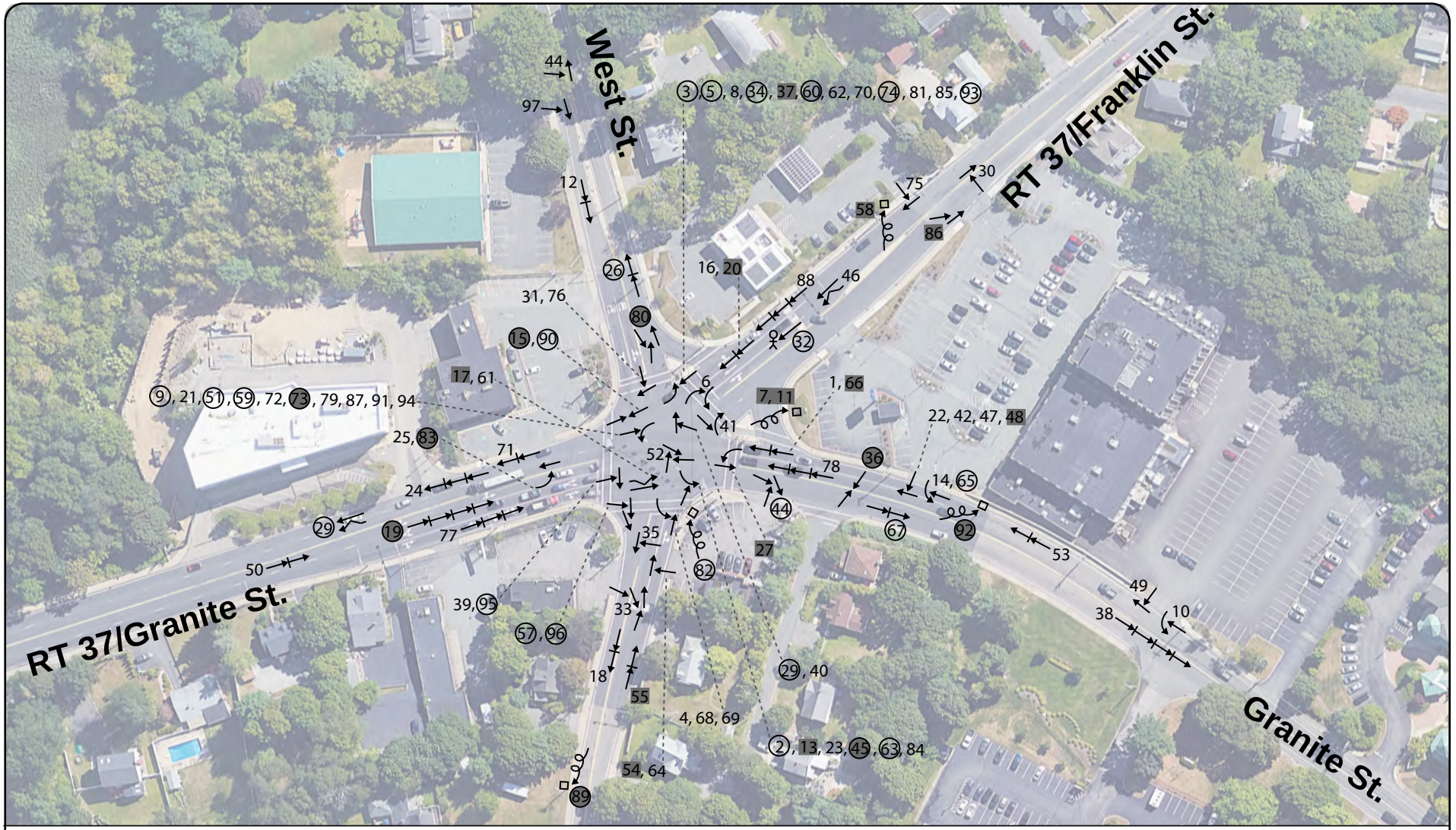
25	07/24/2017	Mon	2:33 PM	2	1	Non-fatal injury	Rear-end	Wet	Daylight	Rain / Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Followed too closely / Operating defective equipment
26	09/18/2017	Mon	4:45 PM	2	2	Non-fatal injury	Angle	Dry	Daylight	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
27	09/30/2017	Sat	3:55 PM	1	0	Not Reported	Single vehicle crash	Wet	Daylight	Rain	Travelling straight ahead	Collision with light pole or other post/support	Not reported
28	10/12/2017	Thu	9:16 PM	2	1	Non-fatal injury	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted / Unknown
29	10/18/2017	Wed	1:24 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
30	10/27/2017	Fri	5:02 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Other improper action / Failed to yield right of way
31	11/12/2017	Sun	1:37 PM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Followed too closely / No improper driving
32	11/17/2017	Fri	1:22 PM	3	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Not reported
33	11/19/2017	Sun	12:33 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention / Made an improper turn
34	11/25/2017	Sat	9:46 PM	2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Not reported	Failed to yield right of way
35	12/13/2017	Wed	6:31 PM	2	1	Non-fatal injury	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / No improper driving
36	12/17/2017	Sun	8:07 PM	2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / No improper driving
37	12/20/2017	Wed	10:52 PM	2	4	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Other improper action
38	12/23/2017	Sat	2:25 PM	2	2	Non-fatal injury	Head-on	Wet	Daylight	Sleet, hail (freezing rain or drizzle)	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
39	12/29/2017	Fri	7:09 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Dark - lighted roadway	Clear	Turning left / Turning right	Not reported	Unknown
40	01/09/2018	Tue	7:37 AM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
41	02/03/2018	Sat	3:40 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not reported
42	02/24/2018	Sat	5:21 PM	4	1	Non-fatal injury	Rear-end	Dry	Dusk	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
43	03/01/2018	Thu	5:42 AM	2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / No improper driving
44	03/10/2018	Sat	3:21 PM	3	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left / Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Failed to yield right of way / Unknown / No improper driving
45	03/15/2018	Thu	2:39 PM	3	0	Property damage only	Angle	Dry	Daylight	Clear	Turning right / Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Made an improper turn
46	04/14/2018	Sat	2:41 PM	3	0	Property damage only	Angle	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc. / No improper driving
47	04/21/2018	Sat	11:35 PM	2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / No improper driving
48	05/05/2018	Sat	3:55 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object	No improper driving
49	05/19/2018	Sat	8:48 PM	2	0	Property damage only	Angle	Wet	Dark - lighted roadway	Rain / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way

Table X
Crash Data Lookup
MassDOT Crash Data 2016-2020

50	05/29/2018	Tue 10:20 AM	1	1	Non-fatal injury	Single vehicle crash	Dry	Daylight	Clear / Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	Operating defective equipment / Unknown
51	05/29/2018	Tue 9:14 PM	4	2	Non-fatal injury	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Other improper action
52	06/05/2018	Tue 4:21 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Unknown
53	06/13/2018	Wed 6:09 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted
54	06/13/2018	Wed 6:02 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not reported
55	08/01/2018	Wed 6:59 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning right	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
56	08/03/2018	Fri 7:15 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Dawn	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Unknown
57	09/11/2018	Tue 9:17 AM	2	1	Non-fatal injury	Angle	Wet	Daylight	Rain	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Fatigued/asleep
58	09/26/2018	Wed 11:49 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / Failed to yield right of way / No improper driving
59	10/07/2018	Sun 4:04 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Cloudy	Travelling straight ahead / Turning right	Collision with motor vehicle in traffic	Failure to keep in proper lane or running off road / Failed to yield right of way / No improper driving
60	10/17/2018	Wed 2:35 PM	1	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings
61	11/01/2018	Thu 11:21 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
62	12/11/2018	Tue 11:18 AM	3	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
63	12/30/2018	Sun 5:21 PM	2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
64	01/08/2019	Tue 8:57 AM	1	0	Property damage only	Single vehicle crash	Wet	Daylight	Cloudy	Turning left	Collision with light pole or other post/support	Inattention
65	04/15/2019	Mon 7:30 PM	3	0	Property damage only	Angle	Dry	Dark - lighted roadway	Cloudy	Turning left / Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
66	04/16/2019	Tue 7:20 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Not reported
67	04/20/2019	Sat 9:19 PM	3	1	Non-fatal injury	Rear-end	Wet	Dark - lighted roadway	Rain	Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
68	06/07/2019	Fri 9:46 PM	2	1	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Not reported	Collision with other movable object	Unknown
69	06/20/2019	Thu 6:07 PM	2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Other improper action
70	07/27/2019	Sat 6:34 PM	3	0	Property damage only	Angle	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
71	07/30/2019	Tue 4:46 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
72	08/12/2019	Mon 11:20 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
73	08/12/2019	Mon 10:12 PM	2	1	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / No improper driving
74	08/17/2019	Sat 2:42 PM	1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Turning left	Collision with motor vehicle in traffic	Unknown

Route 37 at Forbes Rd.
Crash Data Lookup
MassDOT Crash Data 2016-2020

75	09/23/2019	Mon	8:06 PM	2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with other movable object / Collision with motor vehicle in traffic	No improper driving / Inattention
76	10/07/2019	Mon	10:42 AM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
77	10/21/2019	Mon	1:21 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Slowing or stopped in traffic / Turning right	Collision with motor vehicle in traffic	No improper driving / Inattention / Disregarded traffic signs, signals, road markings
78	10/24/2019	Thu	12:46 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings
79	11/06/2019	Wed	5:15 PM	1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Not Reported	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
80	12/06/2019	Fri	11:08 AM	2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Changing lanes	Collision with motor vehicle in traffic	Unknown
81	12/06/2019	Fri	1:47 PM	2	0	Property damage only	Rear-end	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted
82	12/09/2019	Mon	9:42 AM	2	0	Property damage only	Sideswipe, opposite direction	Wet	Daylight	Rain / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention
83	01/11/2020	Sat	7:03 PM	2	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Followed too closely / No improper driving
84	02/24/2020	Mon	10:19 PM	1	1	Non-fatal injury	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Leaving travel lane	Collision with utility pole	Failure to keep in proper lane or running off road / Distracted
85	03/09/2020	Mon	3:03 PM	2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Unknown
86	05/22/2020	Fri	2:05 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Made an improper turn
87	06/21/2020	Sun	1:12 AM	1	1	Non-fatal injury	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with guardrail	Over-correcting/over-steering / Inattention
88	07/14/2020	Tue	7:54 PM	2	2	Non-fatal injury	Sideswipe, opposite direction	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted / Disregarded traffic signs, signals, road markings
89	09/10/2020	Thu	10:47 PM	2	0	Property damage only	Sideswipe, same direction	Wet	Dark - lighted roadway	Rain / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention / Unknown
90	09/16/2020	Wed	10:41 PM	2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Unknown
91	09/25/2020	Fri	1:38 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Other improper action / Unknown / No improper driving
92	12/18/2020	Fri	10:44 PM	2	2	Non-fatal injury	Angle	Ice	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
93	12/21/2020	Mon	5:49 PM	2	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Followed too closely / Other improper action



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#) ,

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- # Nighttime Crash Index Number

BOSTON REGION MPO

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FIGURE 7
Collision Diagram: RT 37/Granite St. at West St. and Franklin St.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at West St, Franklin St, and Granite St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2016-02-05	Fri	12:11 PM		2	0	Property damage only	Rear-end	Snow	Daylight	Snow	Slowing or stopped in traffic / Changing lanes	Collision with motor vehicle in traffic	No improper driving
2	2016-03-01	Tue	3:33 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object	Unknown
3	2016-04-02	Sat	9:31 AM		2	1	Non-fatal injury	Angle	Wet	Daylight	Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
4	2016-04-20	Wed	7:25 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Other improper action
5	2016-05-13	Fri	7:28 PM		2	1	Non-fatal injury	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
6	2016-05-29	Sun	4:24 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Turning left / Turning right	Collision with motor vehicle in traffic	No improper driving
7	2016-06-09	Thu	3:58 AM		1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Fatigued/asleep
8	2016-06-10	Fri	2:54 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
9	2016-06-30	Thu	3:59 PM		2	1	Non-fatal injury	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Failed to yield right of way
10	2016-07-05	Tue	5:37 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
11	2016-08-20	Sat	4:41 AM		1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with curb	Failure to keep in proper lane or running off road
12	2016-08-23	Tue	2:28 PM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
13	2016-08-29	Mon	9:52 PM		2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
14	2016-09-06	Tue	6:41 PM		2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
15	2016-09-17	Sat	9:46 PM		2	2	Non-fatal injury	Head-on	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
16	2016-09-30	Fri	12:34 PM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear / Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted
17	2016-10-10	Mon	9:44 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Dark - lighted roadway	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Physical impairment / Failure to keep in proper lane or running off road / No improper driving
18	2016-11-01	Tue	7:48 AM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
19	2016-11-30	Wed	4:36 PM		4	1	Non-fatal injury	Rear-end	Wet	Dark - lighted roadway	Cloudy / Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with other movable object	Unknown / No improper driving
20	2016-12-21	Wed	6:20 PM		2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Distracted
21	2017-02-14	Tue	10:01 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Made an improper turn
22	2017-02-28	Tue	9:05 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
23	2017-03-22	Wed	8:18 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
24	2017-04-10	Mon	9:55 AM		3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown / No improper driving
25	2017-04-11	Tue	12:17 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving

Table X
Crash Data Lookup
MassDOT Crash Data 2016-2020

26	2017-05-04	Thu	2:44 PM	2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
27	2017-05-25	Thu	12:44 AM	2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with other movable object	Inattention / Disregarded traffic signs, signals, road markings / No improper driving
28	2017-05-25	Thu	11:14 AM	2	1	Non-fatal injury	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Disregarded traffic signs, signals, road markings / No improper driving
29	2017-06-15	Thu	7:55 AM	3	1	Non-fatal injury	Sideswipe, same direction	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Failure to keep in proper lane or running off road
30	2017-06-16	Fri	5:19 PM	2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	No improper driving
31	2017-07-01	Sat	5:04 PM	3	0	Property damage only	Angle	Dry	Daylight	Clear / Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown / No improper driving
32	2017-07-25	Tue	7:25 AM	1	1	Non-fatal injury	Single vehicle crash	Wet	Daylight	Cloudy / Rain	Travelling straight ahead	Collision with pedestrian	No improper driving
33	2017-09-26	Tue	11:29 AM	4	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
34	2017-11-18	Sat	3:41 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not Reported
35	2017-12-01	Fri	2:28 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
36	2018-01-22	Mon	11:32 PM	2	1	Non-fatal injury	Head-on	Wet	Dark - lighted roadway	Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
37	2018-02-20	Tue	1:01 AM	2	0	Property damage only	Angle	Wet	Dark - lighted roadway	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / Failed to yield right of way
38	2018-03-20	Tue	7:30 AM	4	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
39	2018-06-12	Tue	2:21 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
40	2018-07-02	Mon	8:23 AM	2	0	Property damage only	Head-on	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Unknown / No improper driving
41	2018-07-11	Wed	5:49 AM	2	0	Property damage only	Angle	Wet	Daylight	Clear	Turning left / Turning right	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Made an improper turn
42	2018-07-24	Tue	7:17 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object / Collision with motor vehicle in traffic	No improper driving
43	2018-07-26	Thu	5:13 PM	2	0	Property damage only	Angle	Wet	Daylight	Rain	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	No improper driving / Inattention
44	2018-08-11	Sat	3:54 PM	3	1	Non-fatal injury	Angle	Wet	Daylight	Rain	Entering traffic lane / Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic / Other	Unknown / No improper driving
45	2018-09-16	Sun	8:20 PM	2	2	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Turning left / Turning right	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
46	2018-09-28	Fri	5:33 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Cloudy	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway / No improper driving

Route 37 at West St, Franklin St, and Granite St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

47	2018-10-02	Tue	7:54 AM	2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
48	2018-10-02	Tue	7:16 PM	2	0	Property damage only	Sideswipe, opposite direction	Wet	Dark - roadway not lighted	Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown / No improper driving
49	2018-11-10	Sat	12:26 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
50	2018-11-12	Mon	10:17 AM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Glare / No improper driving
51	2018-11-21	Wed	8:35 AM	2	2	Non-fatal injury	Angle	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
52	2018-12-07	Fri	9:26 AM	3	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Failed to yield right of way / Unknown / No improper driving
53	2018-12-10	Mon	7:04 AM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Other improper action
54	2018-12-18	Tue	6:53 AM	2	0	Property damage only	Angle	Ice	Dawn	Clear	Turning right / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
55	2018-12-18	Tue	6:23 AM	2	0	Property damage only	Rear-end	Ice	Dawn	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
56	2019-01-08	Tue	7:00 PM	2	0	Not Reported	Angle	Wet	Dark - lighted roadway	Rain / Fog, smog, smoke	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not Reported
57	2019-01-30	Wed	8:28 AM	3	1	Non-fatal injury	Angle	Dry	Daylight	Not Reported	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
58	2019-02-03	Sun	12:43 AM	1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Overtaking/passing	Collision with curb	Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
59	2019-03-12	Tue	9:06 AM	2	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Made an improper turn
60	2019-04-30	Tue	10:44 AM	2	1	Non-fatal injury	Angle	Wet	Daylight	Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
61	2019-05-13	Mon	3:14 PM	2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Slowing or stopped in traffic / Changing lanes	Collision with motor vehicle in traffic	No improper driving / Inattention
62	2019-05-21	Tue	5:25 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
63	2019-06-08	Sat	4:08 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object	No improper driving / Failed to yield right of way / Exceeded authorized speed limit)
64	2019-06-13	Thu	8:43 AM	2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Rain	Turning right / Travelling straight ahead	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
65	2019-07-01	Mon	9:45 AM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	Failed to yield right of way / Unknown / No improper driving
66	2019-07-12	Fri	10:56 PM	2	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Driving too fast for conditions / No improper driving
67	2019-07-24	Wed	4:43 PM	2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
68	2019-08-01	Thu	1:30 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Turning left / Turning right	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
69	2019-08-08	Thu	10:06 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Visibility obstructed
70	2019-08-28	Wed	4:20 PM	2	0	Property damage only	Angle	Wet	Daylight	Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Other improper action
71	2019-09-29	Sun	4:39 PM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving

Route 37 at West St, Franklin St, and Granite St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

72	2019-10-07	Mon	3:37 PM	3	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with other movable object / Collision with motor vehicle in traffic	Unknown
73	2019-10-08	Tue	6:45 AM	2	1	Non-fatal injury	Angle	Dry	Dawn	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Inattention / Disregarded traffic signs, signals, road markings / No improper driving
74	2019-10-18	Fri	3:24 PM	2	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
75	2019-10-19	Sat	1:30 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
76	2019-10-22	Tue	11:21 AM	2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
77	2019-10-23	Wed	12:40 PM	3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Changing lanes	Collision with motor vehicle in traffic	No improper driving / Other improper action
78	2019-10-26	Sat	9:07 AM	3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown / No improper driving / Inattention
79	2019-11-01	Fri	3:49 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not Reported
80	2019-11-05	Tue	4:52 PM	3	1	Non-fatal injury	Angle	Wet	Dark - lighted roadway	Rain	Travelling straight ahead / Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
81	2019-12-12	Thu	3:42 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Not Reported
82	2019-12-17	Tue	9:15 AM	1	1	Non-fatal injury	Single vehicle crash	Ice	Daylight	Sleet, hail (freezing rain or drizzle) / Snow	Slowing or stopped in traffic	Collision with light pole or other post/support	No improper driving
83	2020-01-14	Tue	7:22 PM	2	1	Non-fatal injury	Angle	Wet	Dark - lighted roadway	Rain	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
84	2020-02-05	Wed	6:48 AM	2	0	Property damage only	Sideswipe, opposite direction	Dry	Daylight	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
85	2020-02-05	Wed	1:58 PM	3	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with other movable object / Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
86	2020-02-09	Sun	6:40 PM	2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Turning right / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown
87	2020-02-29	Sat	1:57 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention / Made an improper turn
88	2020-03-03	Tue	7:30 AM	3	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Inattention
89	2020-03-13	Fri	11:31 PM	1	1	Non-fatal injury	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Turning left	Collision with utility pole	Exceeded authorized speed limit / Disregarded traffic signs, signals, road markings
90	2020-06-03	Wed	4:42 PM	2	2	Non-fatal injury	Head-on	Dry	Daylight	Clear	Travelling straight ahead / Leaving traffic lane	Collision with motor vehicle in traffic	No improper driving / Wrong side or wrong way / Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
91	2020-06-21	Sun	5:31 PM	2	0	Property damage only	Angle	Wet	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Unknown / No improper driving
92	2020-06-28	Sun	12:07 AM	1	1	Non-fatal injury	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with other fixed object (wall, building, tunnel, etc.)	Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / Over-correcting/over-steering

Route 37 at West St, Franklin St, and Granite St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

93	2020-09-01	Tue	4:57 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / No improper driving
94	2020-09-08	Tue	8:01 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Slowing or stopped in traffic / Turning left	Collision with motor vehicle in traffic	No improper driving / Visibility obstructed
95	2020-09-26	Sat	12:07 PM	2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Disregarded traffic signs, signals, road markings / No improper driving
96	2020-11-28	Sat	11:17 AM	3	3	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Failed to yield right of way
97	2020-12-10	Thu	8:07 AM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	No improper driving / Visibility obstructed / Failed to yield right of way

SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

- # , (#) , (#) , #
- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- # Nighttime Crash Index Number

BOSTON REGION MPO

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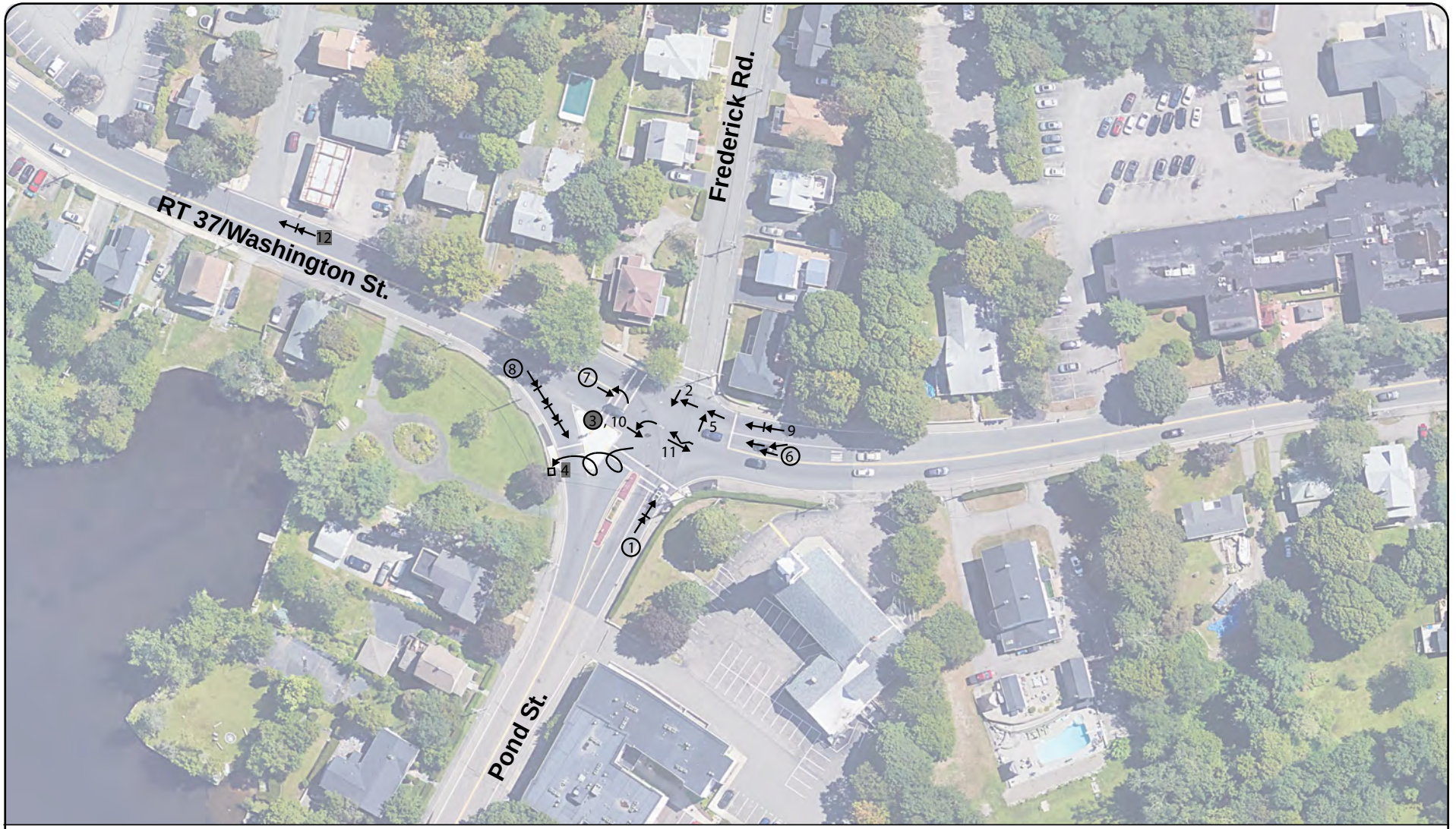
FIGURE 8
Collision Diagram: RT 37/Franklin St. at John W. Leroy Jr. Way
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at Leroy Way
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2017-03-07	Tue	7:19 AM		2	0	Property damage only	Rear-end	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Followed too closely / Unknown / No improper driving
2	2017-05-06	Sat	1:51 PM		2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Turning right	Collision with motor vehicle in traffic	No improper driving / Made an improper turn
3	2017-05-17	Wed	7:12 PM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Turning left	Collision with motor vehicle in traffic	Over-correcting/over-steering / Inattention
4	2017-06-01	Thu	9:28 AM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
5	2017-11-12	Sun	6:14 PM		4	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with other movable object	No improper driving / Unknown
6	2018-01-18	Thu	6:56 AM		2	0	Property damage only	Angle	Wet	Daylight	Cloudy / Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Unknown
7	2018-10-14	Sun	3:17 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	Unknown
8	2019-05-31	Fri	5:17 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Turning left / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
9	2019-06-19	Wed	2:45 PM		2	2	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Slowing or stopped in traffic	Collision with other movable object	Inattention / No improper driving
10	2019-07-02	Tue	10:49 AM		3	1	Non-fatal injury	Rear-end	Dry	Daylight	Cloudy	Travelling straight ahead / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Followed too closely / Inattention / No improper driving
11	2019-09-15	Sun	1:06 PM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with utility pole	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.
12	2019-12-01	Sun	6:05 PM		2	2	Non-fatal injury	Head-on	Snow	Dark - lighted roadway	Snow	Travelling straight ahead	Collision with motor vehicle in traffic	Followed too closely / Driving too fast for conditions
13	2020-02-20	Thu	4:20 PM		1	0	Property damage only	Single vehicle crash	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Not reported
14	2020-05-14	Thu	12:54 PM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Turning right	Collision with motor vehicle in traffic	No improper driving / Other improper action



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

- # , (#) , (#) , #,
- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- #, Nighttime Crash Index Number

BOSTON REGION MPO

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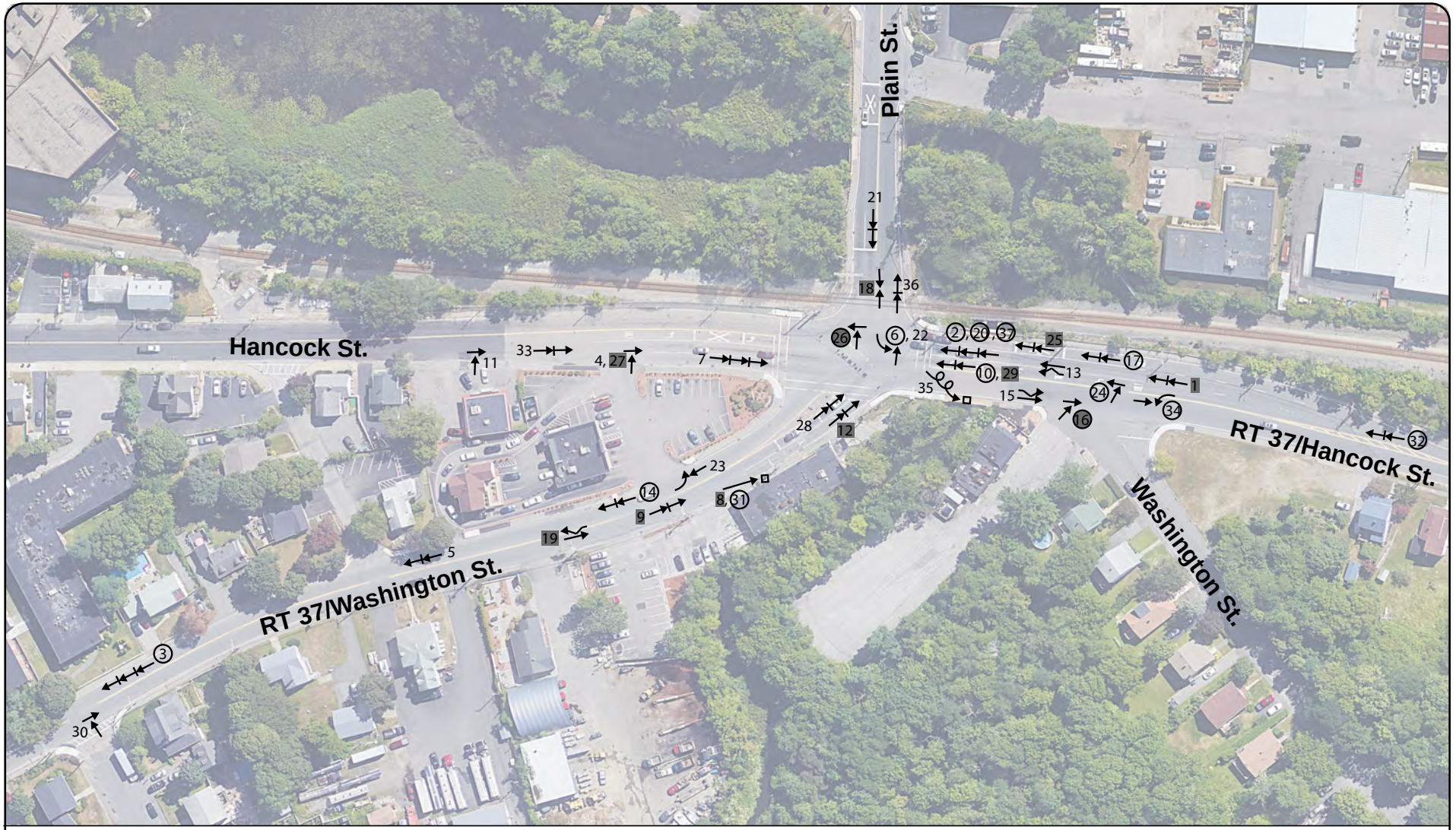
FIGURE 10
Collision Diagram: RT 37/Washington St. at Pond St. and Frederick Rd.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Town of Braintree

Route 37 at Pond St./Frederick St
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	2017-02-15	Wed	2:16 PM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
2	2017-12-21	Thu	10:54 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Disregarded traffic signs, signals, road markings / Inattention
3	2018-05-10	Thu	9:24 PM		2	2	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
4	2018-05-20	Sun	1:12 AM		1	0	Property damage only	Single vehicle crash	Wet	Dark - lighted roadway	Rain	Turning left	Collision with embankment	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc. / Over-correcting/over-steering
5	2018-08-31	Fri	11:46 AM		2	0	Property damage only	Angle	Dry	Daylight	Clear	Entering traffic lane / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
6	2018-09-07	Fri	7:13 AM		3	2	Non-fatal injury	Angle	Wet	Daylight	Cloudy / Rain	Changing lanes / Slowing or stopped in traffic / Turning left	Collision with motor vehicle in traffic	Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / No improper driving
7	2019-02-27	Wed	3:52 PM		2	1	Non-fatal injury	Angle	Dry	Daylight	Clear	Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Failure to keep in proper lane or running off road / No improper driving
8	2019-05-03	Fri	11:26 AM		4	2	Non-fatal injury	Rear-end	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Failure to keep in proper lane or running off road / No improper driving
9	2019-11-20	Wed	8:31 AM		2	0	Property damage only	Rear-end	Wet	Daylight	Cloudy / Rain	Slowing or stopped in traffic / Turning right	Collision with motor vehicle in traffic	No improper driving / Inattention
10	2019-12-11	Wed	7:17 AM		2	0	Property damage only	Angle	Snow	Daylight	Snow / Cloudy	Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
11	2020-06-19	Fri	2:29 PM		2	0	Property damage only	Sideswipe, opposite direction	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention
12	2020-12-29	Tue	9:32 PM		2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Unknown



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#) #,

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- #, Nighttime Crash Index Number

BOSTON REGION MPO

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FIGURE 11
Collision Diagram: RT 37/Washington St. at Hancock St. and Plain St.
Police Crash Reports 2016-20

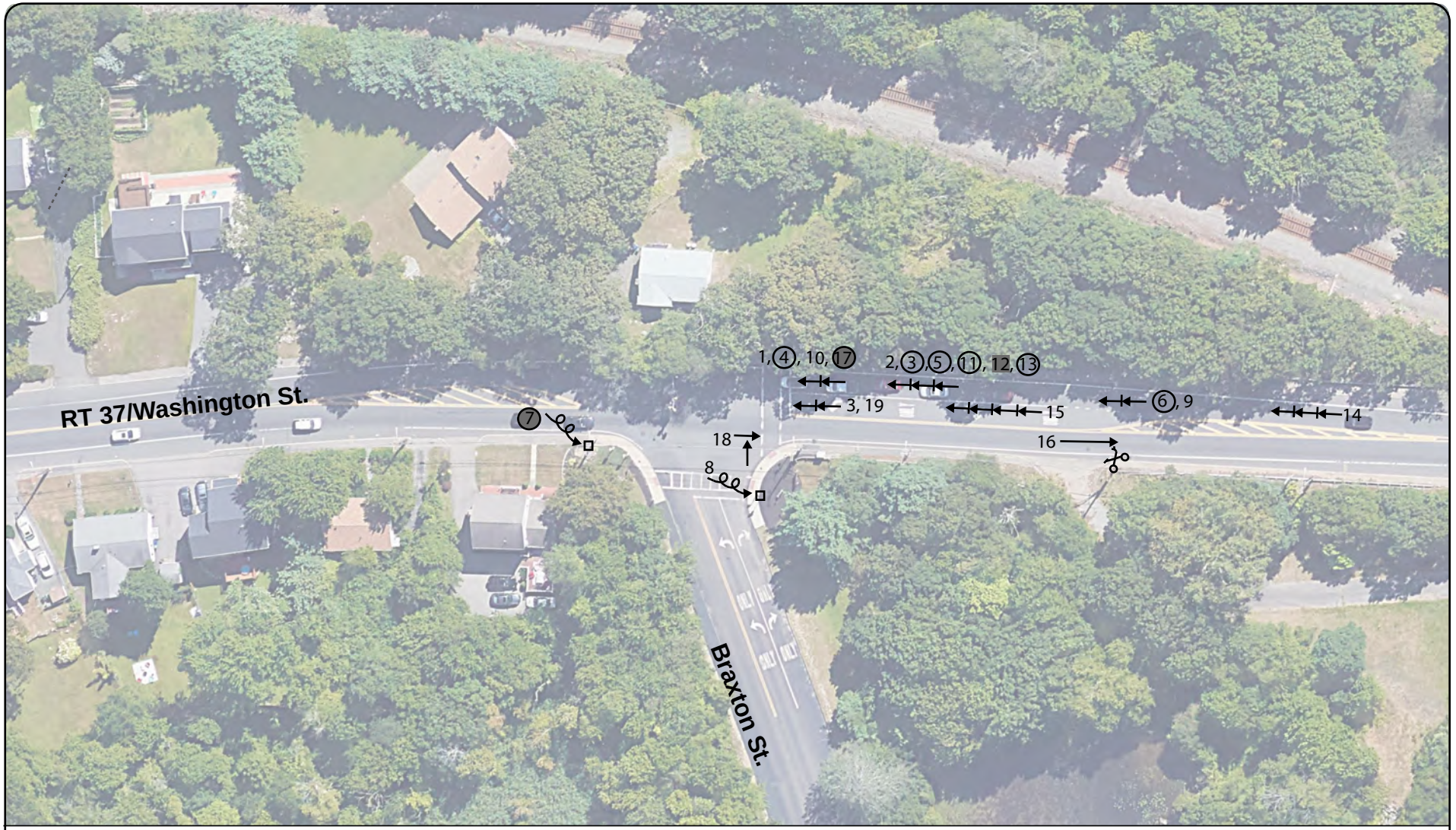
Route 37 Priority Corridor Study
Town of Braintree

Route 37 at Plain St and Hancock St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

Index	Crash Date	Day	Time	Peak Hour	# Veh	# Injured	Crash Severity	Manner of Collision	Road Surface Conditions	Ambient Light Conditions	Weather Conditions	Vehicle Actions Prior Crash	Most Harmful Event	Driver Contributing Code
1	01/06/2016	Wed	5:42 PM		2	0	Property damage only	Rear-end	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Unknown
2	02/04/2016	Thu	6:56 AM		3	1	Non-fatal injury	Rear-end	Wet	Daylight	Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Followed too closely
3	04/21/2016	Thu	10:26 AM		3	2	Non-fatal injury	Rear-end	Dry	Daylight	Clear / Cloudy	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
4	06/30/2016	Thu	8:43 AM		2	0	Property damage only	Angle	Dry	Daylight	Not reported	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
5	07/18/2016	Mon	1:06 PM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
6	09/06/2016	Tue	3:13 PM		2	2	Non-fatal injury	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
7	09/14/2016	Wed	4:39 PM		3	0	Property damage only	Rear-end	Dry	Daylight	Cloudy	Slowing or stopped in traffic / Making U-turn	Collision with motor vehicle in traffic	No improper driving / Made an improper turn / Illness
8	11/06/2016	Sun	9:04 PM		1	0	Property damage only	Single vehicle crash	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with utility pole	No improper driving
9	01/26/2017	Thu	5:52 PM		2	0	Property damage only	Rear-end	Wet	Dark - lighted roadway	Cloudy / Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Distracted
10	03/05/2017	Sun	2:33 PM		2	3	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention
11	03/17/2017	Fri	12:26 PM		2	0	Property damage only	Angle	Dry	Daylight	Clear / Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Inattention / Unknown
12	03/20/2017	Mon	10:34 PM		2	0	Property damage only	Rear-end	Sand, mud, dirt, oil, gravel	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Inattention / Disregarded traffic signs, signals, road markings
13	04/23/2017	Sun	4:47 PM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Changing lanes / Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Failed to yield right of way / No improper driving
14	05/09/2017	Tue	6:09 AM		2	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Entering traffic lane	Collision with motor vehicle in traffic	No improper driving
15	07/01/2017	Sat	6:57 AM		2	0	Property damage only	Sideswipe, same direction	Dry	Daylight	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
16	09/05/2017	Tue	6:58 PM		2	1	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving
17	09/20/2017	Wed	7:43 AM		2	1	Non-fatal injury	Rear-end	Wet	Daylight	Rain	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving /Distracted / Followed too closely
18	11/17/2017	Fri	5:25 PM		2	0	Property damage only	Head-on	Dry	Dark - lighted roadway	Clear	Slowing or stopped in traffic / Overtaking/passing	Collision with motor vehicle in traffic	No improper driving / Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / Disregarded traffic signs, signals, road markings
19	11/22/2017	Wed	6:21 PM		2	0	Property damage only	Sideswipe, opposite direction	Wet	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving
20	03/29/2018	Thu	11:19 AM		3	1	Non-fatal injury	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving
21	05/29/2018	Tue	6:00 PM		2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Turning left	Collision with motor vehicle in traffic	Followed too closely
22	06/05/2018	Tue	8:44 AM		2	0	Property damage only	Angle	Dry	Daylight	Cloudy	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way

Route 37 at Plain St and Hancock St.
Crash Data Lookup
MassDOT Crash Data 2016-2020

23	07/09/2018	Mon	7:31 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Failed to yield right of way / Operating vehicle in erratic, reckless, careless, negligent or aggressive manner / Exceeded authorized speed limit
24	09/19/2018	Wed	9:50 AM	2	1	Non-fatal injury	Angle	Wet	Daylight	Cloudy / Rain	Travelling straight ahead / Entering traffic lane	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way / Visibility obstructed
25	12/18/2018	Tue	5:37 AM	2	0	Property damage only	Rear-end	Ice	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	Not reported
26	01/26/2019	Sat	10:41 PM	2	2	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear	Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Unknown
27	03/06/2019	Wed	2:17 AM	2	0	Property damage only	Angle	Dry	Dark - lighted roadway	Clear	Backing / Slowing or stopped in traffic	Collision with motor vehicle in traffic	Inattention / No improper driving
28	05/23/2019	Thu	7:49 AM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / No improper driving
29	06/26/2019	Wed	1:47 AM	2	0	Not Reported	Rear-end	Wet	Dark - lighted roadway	Rain	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Unknown
30	06/28/2019	Fri	6:59 PM	2	0	Property damage only	Angle	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	Unknown
31	10/10/2019	Thu	2:52 PM	1	3	Non-fatal injury	Single vehicle crash	Dry	Daylight	Cloudy / Rain	Travelling straight ahead	Collision with motor vehicle in traffic	Inattention / Failure to keep in proper lane or running off road
32	10/12/2019	Sat	12:33 PM	3	4	Non-fatal injury	Rear-end	Wet	Daylight	Rain	Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Unknown
33	06/16/2020	Tue	5:10 PM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Travelling straight ahead / Turning left	Collision with motor vehicle in traffic	No improper driving / Failed to yield right of way
34	06/24/2020	Wed	1:23 PM	2	3	Non-fatal injury	Angle	Dry	Daylight	Clear	Slowing or stopped in traffic / Travelling straight ahead	Collision with motor vehicle in traffic	No improper driving / Failure to keep in proper lane or running off road
35	11/30/2020	Mon	2:00 PM	1	0	Property damage only	Single vehicle crash	Wet	Daylight	Rain / Cloudy	Turning left	Collision with curb	Over-correcting/over-steering
36	12/03/2020	Thu	12:18 PM	2	0	Property damage only	Rear-end	Dry	Daylight	Clear	Turning left / Slowing or stopped in traffic	Collision with motor vehicle in traffic	No improper driving / Followed too closely
37	12/21/2020	Mon	8:24 AM	3	1	Non-fatal injury	Rear-end	Wet	Daylight	Cloudy	Slowing or stopped in traffic	Collision with other movable object	No improper driving



BOSTON REGION MPO

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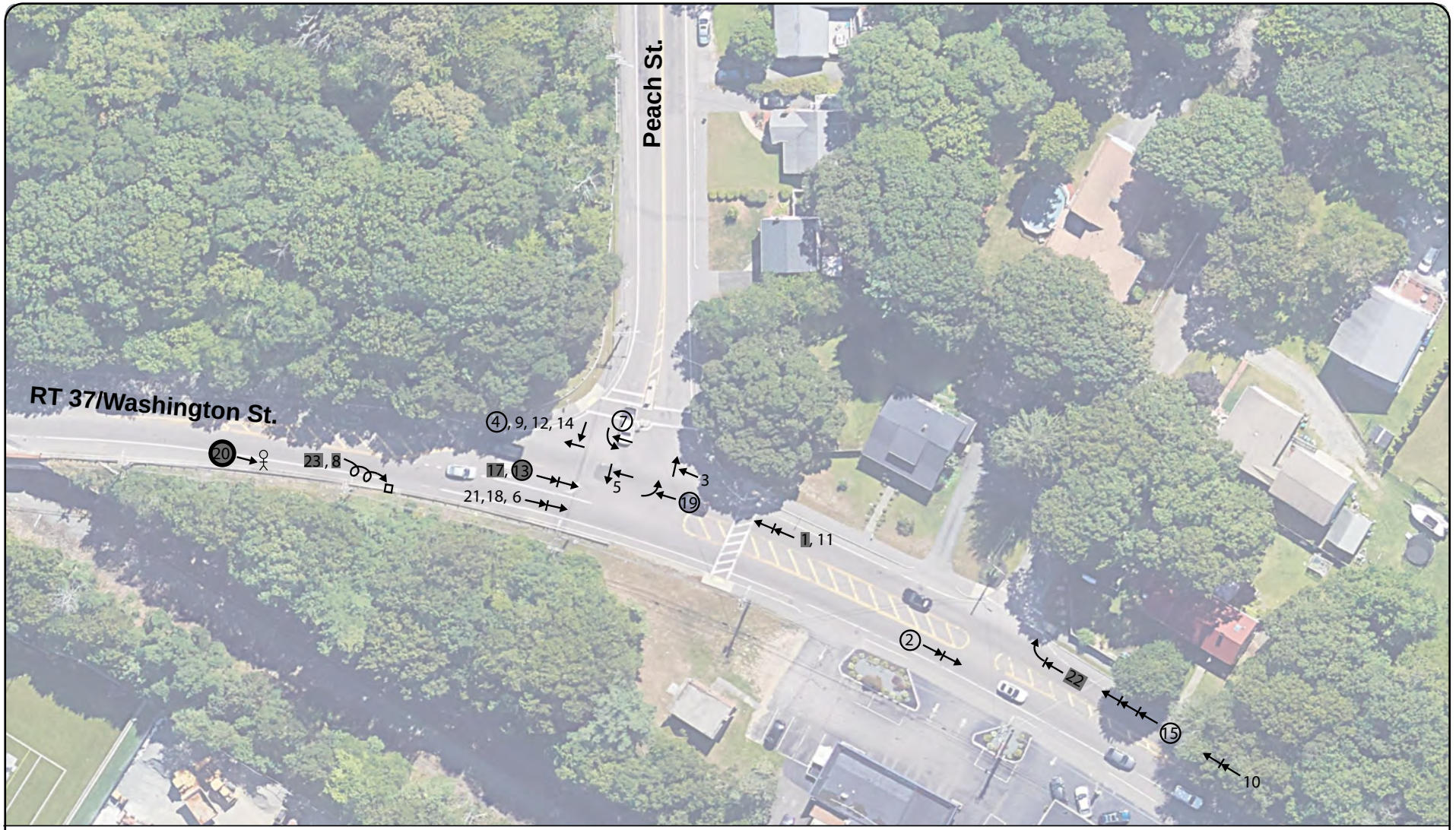
FIGURE 12
Collision Diagram: RT 37/Washington St. at Braxton St.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#)

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number

BOSTON REGION MPO

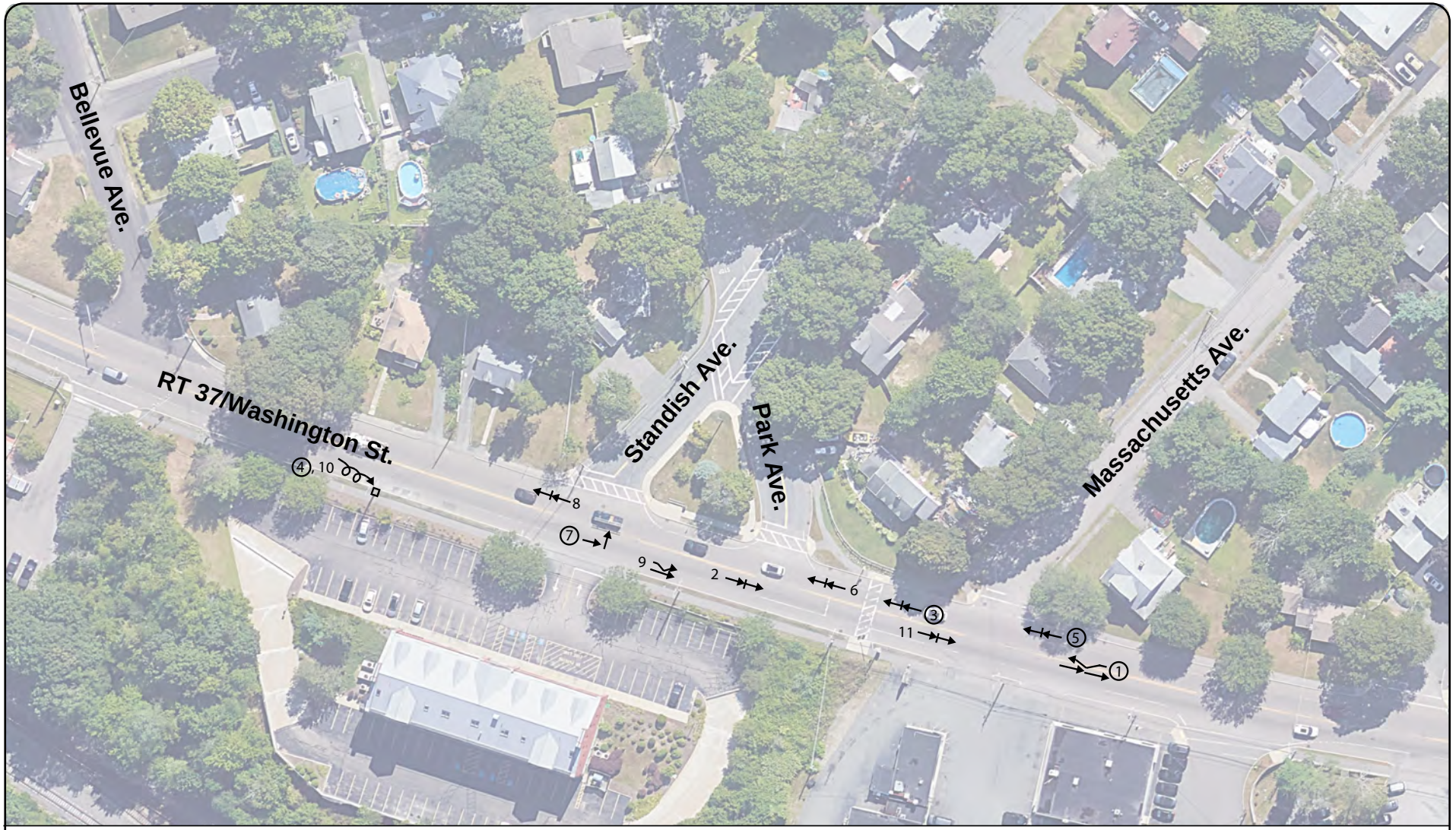
N

FIGURE 13
Collision Diagram: RT 37/Washington St. at Peach St.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Route 37 at Peach St
Crash Lookup Table
MassDOT Crash Data 2016-2020

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	4132160	01/08/2016	Property damage only (none injured)	7:24 AM	2016	No injury	D1: (Inattention) / D2: (No improper driving)	D1: External distraction (outside the vehicle) / D2: Not Distracted	Dawn	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
2	4323206	02/08/2017	Non-fatal injury	12:05 PM	2017	Non-fatal injury - Possible	D1: (Distracted),(Distracted) / D2: (No improper driving),(No improper driving)	D1: Other activity (searching, eating, personal hygiene, etc.) / D2: Not Distracted	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Parked	Clear/Clear
3	4337757	03/14/2017	Property damage only (none injured)	2:48 PM	2017	No injury	D1: (No improper driving) / D2: (No improper driving)		Daylight	Angle	Snow	V1: Making U-turn / V2: Travelling straight ahead	Snow/Sleet, hail (freezing rain or drizzle)
4	4344026	03/29/2017	Non-fatal injury	4:24 PM	2017	Non-fatal injury - Possible	D2: (Failed to yield right of way)	D1: Not Distracted	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
5	4345055	03/31/2017	Property damage only (none injured)	7:16 AM	2017	No injury	D1: (No improper driving),(No improper driving) / D2: (No improper driving),(No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear/Clear
6	4379838	06/20/2017	Property damage only (none injured)	7:42 AM	2017	No injury	D1: (No improper driving),(No improper driving) / D2: (No improper driving),(No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy/Cloudy
7	4452296	11/12/2017	Non-fatal injury	7:53 AM	2017	Non-fatal injury - Non-incapacitating	D1: (Exceeded authorized speed limit),(No improper driving) / D2: (Failed to yield right of	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
8	4479610	01/05/2018	Property damage only (none injured)	9:19 PM	2018	No injury	D1: (Failure to keep in proper lane or running off road)		Dark - lighted roadway	Single vehicle crash	Snow	V1: Travelling straight ahead	Clear
9	4550438	06/08/2018	Property damage only (none injured)	7:01 AM	2018	No injury	D1: (No improper driving)		Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning right	Clear
10	4602322	09/28/2018	Property damage only (none injured)	7:44 AM	2018	No injury	D1: (No improper driving) / D2: (Exceeded authorized speed limit)	D1: Not Distracted / D2: Not Distracted	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Rain
11	4621866	11/14/2018	Property damage only (none injured)	8:45 AM	2018	No injury	D1: (No improper driving) / D2: (Other improper action)		Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
12	4701748	04/09/2019	Property damage only (none injured)	1:34 PM	2019	No Apparent Injury (O)	D1: (No improper driving),(No improper driving) / D2: (No improper driving),(No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear/Clear
13	4699773	05/12/2019	Non-fatal injury	6:45 PM	2019	Suspected Minor Injury (B)	D1: (No improper driving),(No improper driving) / D2: (No improper driving),(No improper driving)	D1: Not Distracted / D2: Not Distracted	Dark - lighted roadway	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Rain/Cloudy
14	4748626	09/12/2019	Property damage only (none injured)	2:29 PM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown)		Daylight	Angle	Wet	V1: Travelling straight ahead / V2: Turning left	Rain
15	4816155	02/11/2020	Non-fatal injury	7:57 AM	2020	Possible Injury (C)	D1: (No improper driving),(No improper driving) / D3: (No improper driving),(No improper driving)	D1: Not Distracted / D3: Not Distracted	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Travelling straight ahead	Rain
16	4182677	04/30/2016	Non-fatal injury	5:12 PM	2016	Non-fatal injury - Possible			Daylight	Single vehicle crash	Dry	V1: Turning left	Clear
17	4187553	05/07/2016	Property damage only (none injured)	7:59 PM	2016	No injury	D1: (No improper driving),(No improper driving) / D2: (Unknown),(Unknown)		Dark - lighted roadway	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy/Rain
18	4394310	07/22/2017	Property damage only (none injured)	2:43 PM	2017	No injury	D1: (No improper driving) / D2: (No improper driving)		Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear/Clear
19	4513841	03/14/2018	Non-fatal injury	12:25 PM	2018	Non-fatal injury - Possible	D1: (Inattention),(Disregarded traffic signs, signals, road markings) / D2: (No improper driving),(No improper driving)		Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear/Cloudy
20	4646032	12/15/2018	Fatal injury	12:50 AM	2018	Fatal injury (K)	D1: (Failure to keep in proper lane or running off road)		Dark - lighted roadway	Single vehicle crash	Wet	V1: Travelling straight ahead	Cloudy
21	4668901	02/27/2019	Property damage only (none injured)	8:29 AM	2019	No injury			Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear/Clear
22	4267304	10/21/2016	Property damage only (none injured)	6:39 PM	2016	No injury		D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Wet	V1: Travelling straight ahead / V2: Turning right	Rain
23	4237750	08/27/2016	Property damage only (none injured)	5:15 AM	2016	No injury	D1: (Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, e),(Inattention)	D1: Not Distracted	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead	Clear/Clear



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#) , #,

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- #, Nighttime Crash Index Number

BOSTON REGION MPO

N

FIGURE 14
Collision Diagram: RT 37/Washington St. at Standish Ave. and Park Ave.
Police Crash Reports 2016-20

Route 37 Priority Corridor Study
Braintree, Massachusetts

Appendix F

Community Survey Results

Braintree

Braintree

Braintree

Braintree

Weymouth

Braintree

Pembroke Ma

Norwell

Braintree

Braintree

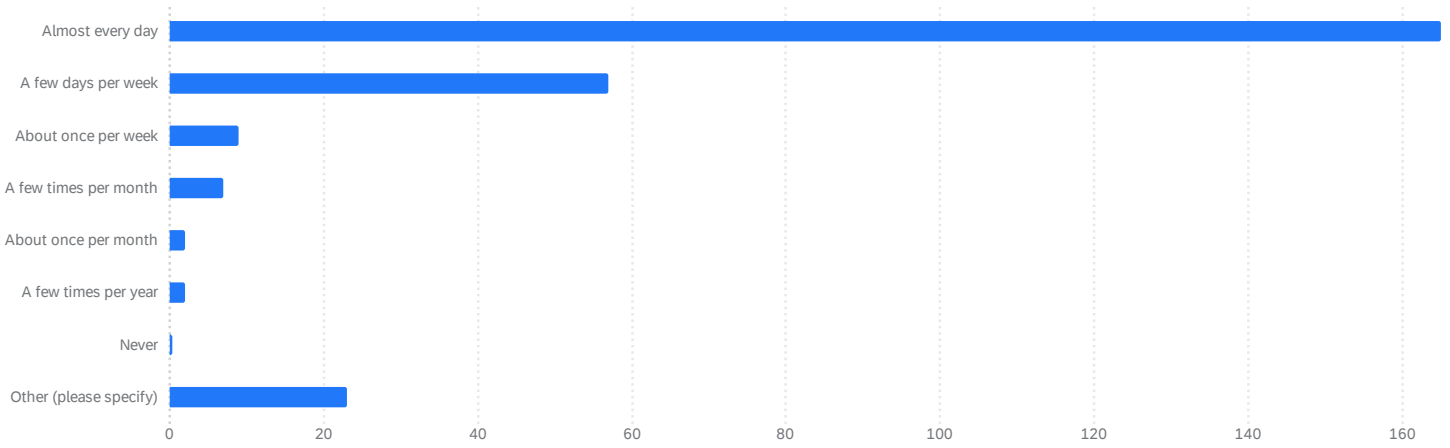
Braintree

Braintree

Braintree

Braintree

How often do you travel on Route 37 in Braintree? Select only one. 265



How often do you travel on Route 37 in Braintree? Select only one.: Other (please specify)

every day

daily I live on Franklin Street

live in Braintree Highlands work an Braintree Hill Office Park

It's s nightmarr

Every day

Multiple times each day

Multiple times every day

Everyday, I live on RT 37

1-2 x/ day

Every day

Every Dad

I live on 37 and use it every day!

Multiple times every day

Every day

School year

Several times Every day

Every day

Several times per day

Multiple times every day

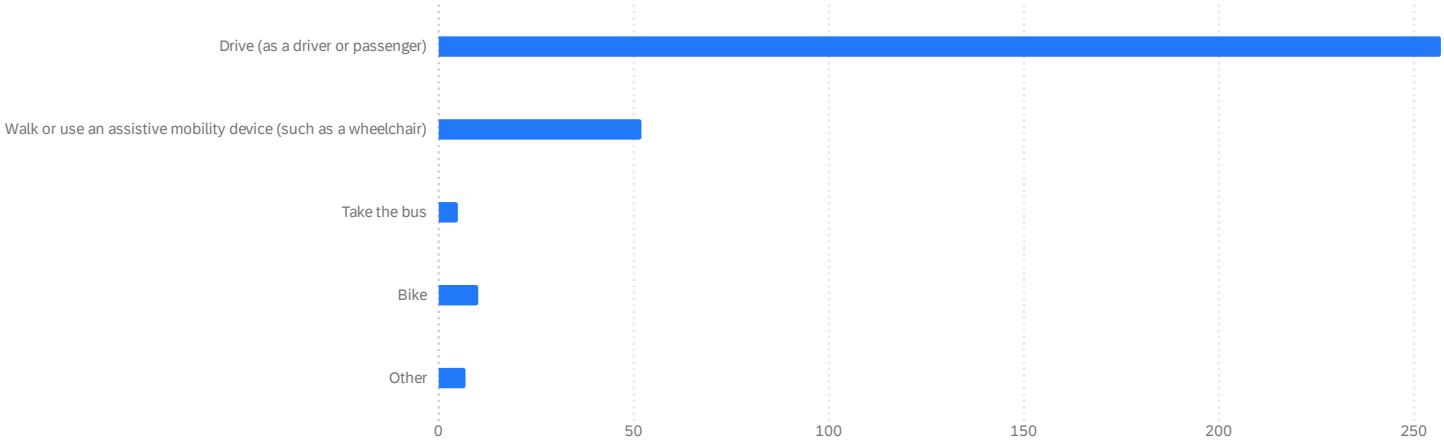
At least twice a day

Multiple times every day

Everyday

Frequently use Route 47

How do you typically travel on Route 37 in Braintree? Select all that apply. 266



How do you typically travel on Route 37 in Braintree? Select all that apply.: Other

Run

Walk

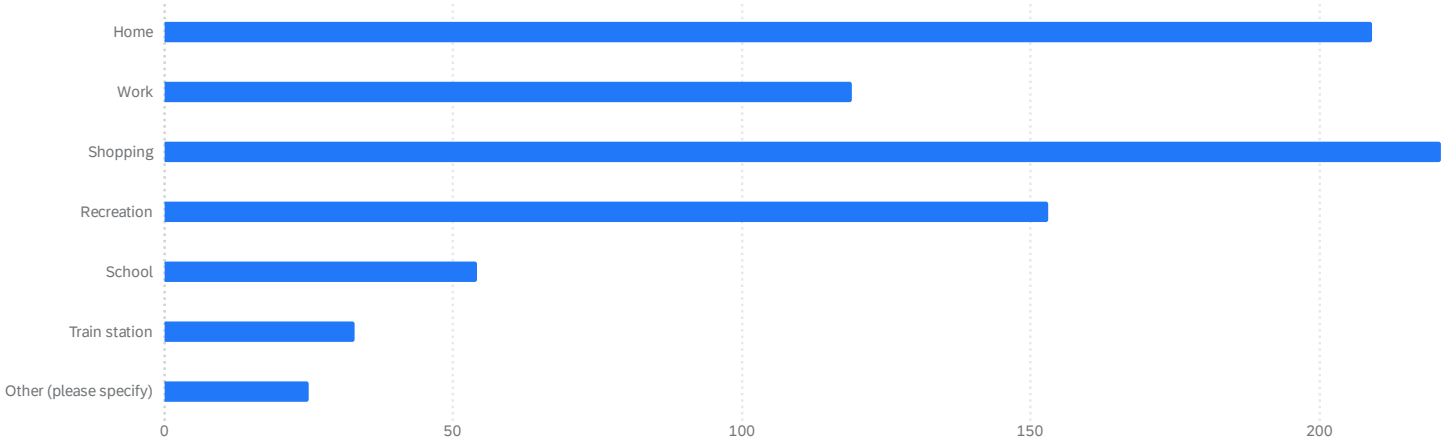
Travel every day. Live there.

Run

Walk

I use a cane for my disabilities I am only 44

Where are you traveling when using Route 37 in Braintree? Select all that apply. 263



Where are you traveling when using Route 37 in Braintree? Select all that apply.: Other (please specify)

everywhere

Everywhere. I live on Route 37

Use route 37 live on Brewster Avenue travel tRoute 37 several times a day

Sports

Isiting friends

Appointments

Visiting family

Picking up grandchild

Sports

food

Passing through.

Caregiver parent

doctor visits, family visits

Library, Town Hall

Appointments, services, banking

To rte 128 north

Visiting relatives

Daycare

Church, visit mother, library

Appointments

Visiting family

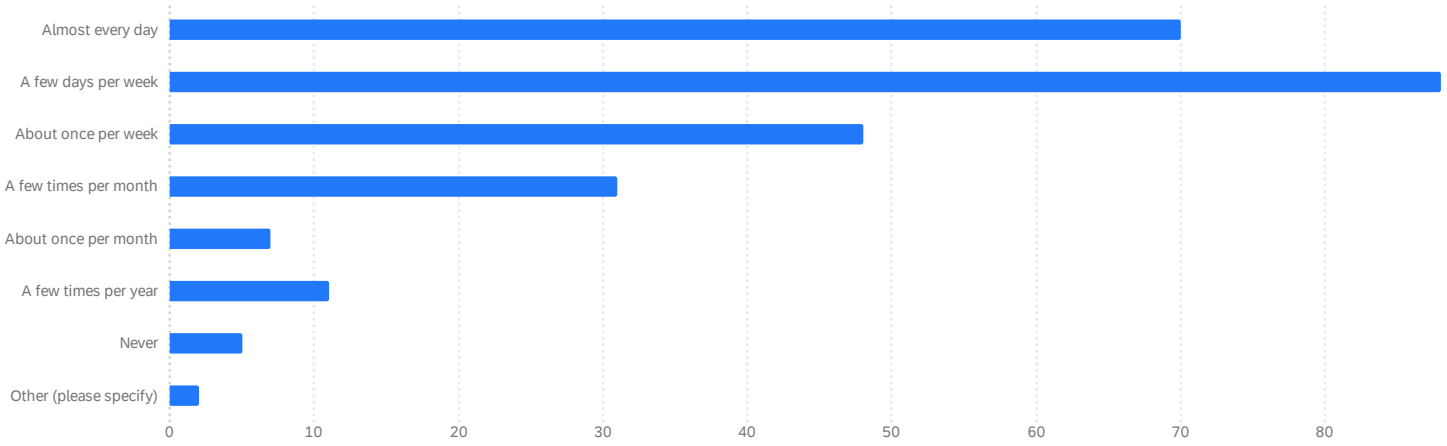
Walking my service dog

Healthcare, Church, Errands, Friends,

Parents house

Going to south Shire Plaza

When using Route 37, how often are you traveling outside of Braintree? Select only one. 262

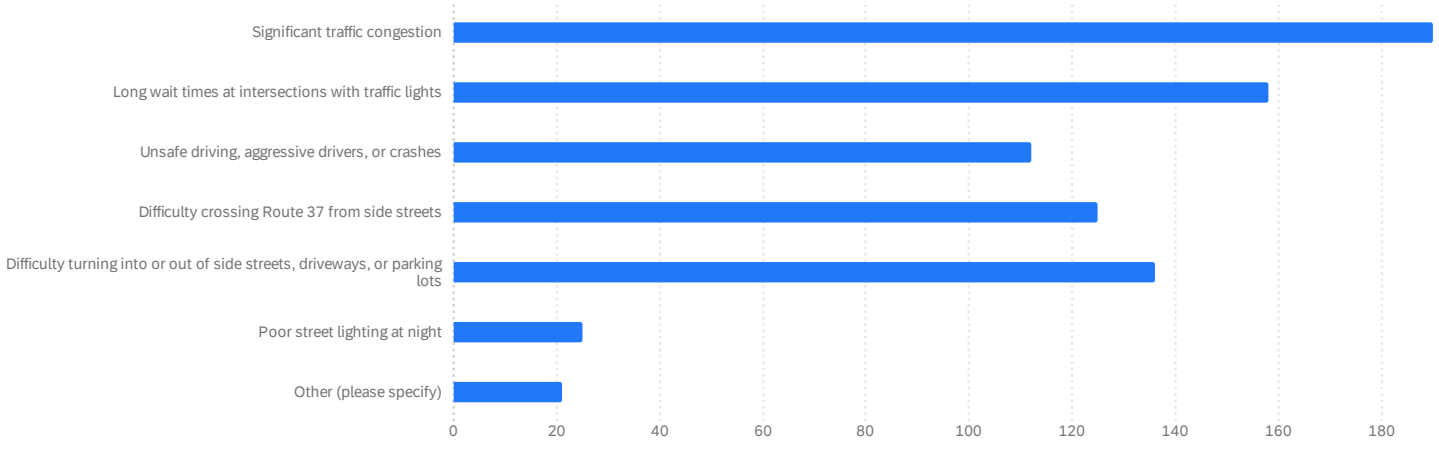


When using Route 37, how often are you traveling outside of Braintree? Select only one.: Other (please specify)

Every day.. Live there on 37

I rarely leave Braintree now

What are the challenges you experience driving on Route 37? Select all that apply. 245



What are the challenges you experience driving on Route 37? Select all that apply.: Other (please specify)

everything above except poor lighting

The intersection at Common st coming out to granite st is a mess. The lights are not long enough trying to leave common st in any direction. Most mornings the light lets about 5 or 6 cars thru before the lights change. I think that the whole intersection from the on/ off ramps from 93 could use a total revamp. There is no good way to approach or even go thru here without stopping at least twice waiting for lights to change.

Large portion of 37 are not wide enough

Badly timed traffic signals. Side street calls have long delays even when there is no traffic on Route 37.

Trying to take a left onto 37S from Peach St is a nightmare. I assume we re waiting for a death to put in a light.

None

Only during morning and afternoon commute to work.

Difficulty getting out and in of my own driveway every day

Bike Lane

unavoidable traffic during morning commting

none

When it's one lane of traffic going either way, and someone needs to get on route 37 from the side streets near highlands school, it's impossible. In the morning, between7-8 am, is very difficult to pull out from Wildwood or Peach onto route 37 and I think traffic lights are needed at these two busy intersections. It's only a matter of time someone else is hit and killed AGAIN! on

Pedestrian lights don't work

Unable to cross as a pedestrian

Many drivers exceed the speed limit & drive like they are on Rt. 128 & Rt. 3

speeding cars and motorcycles

Traffic lights thst don't work.

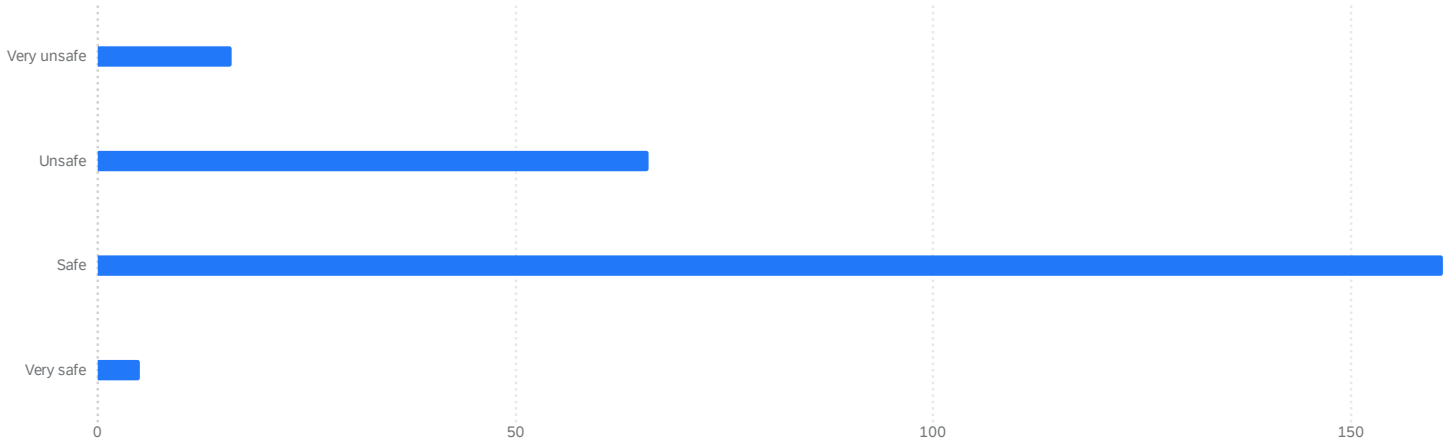
Poor pedestrian access, off the main street

The set of lights at Braxton letting one car out.

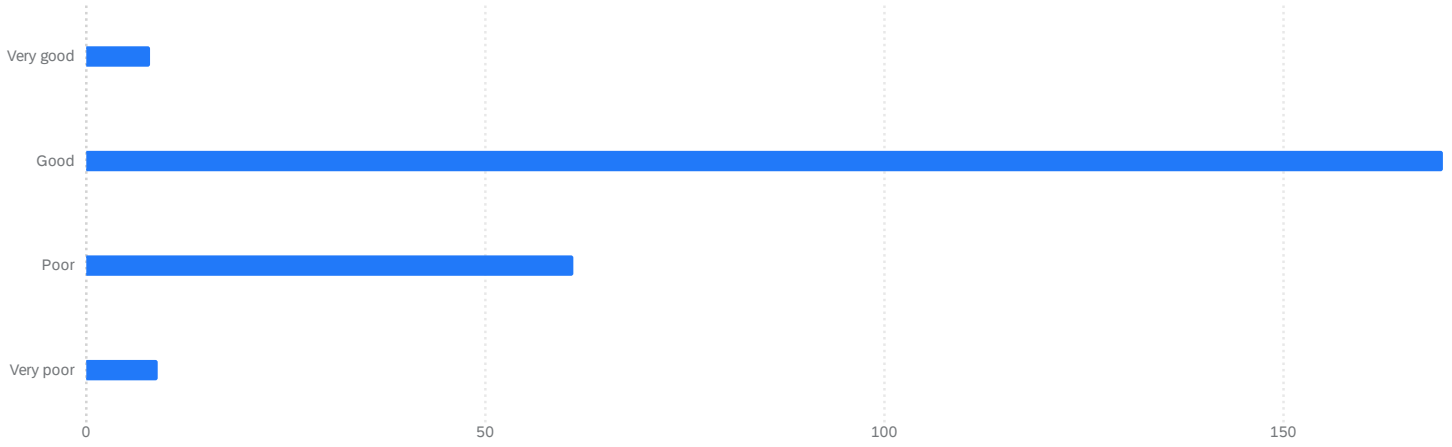
Danger at cross walk and lack of walk lights

Driving off peak hours can reduce traffic on route 37

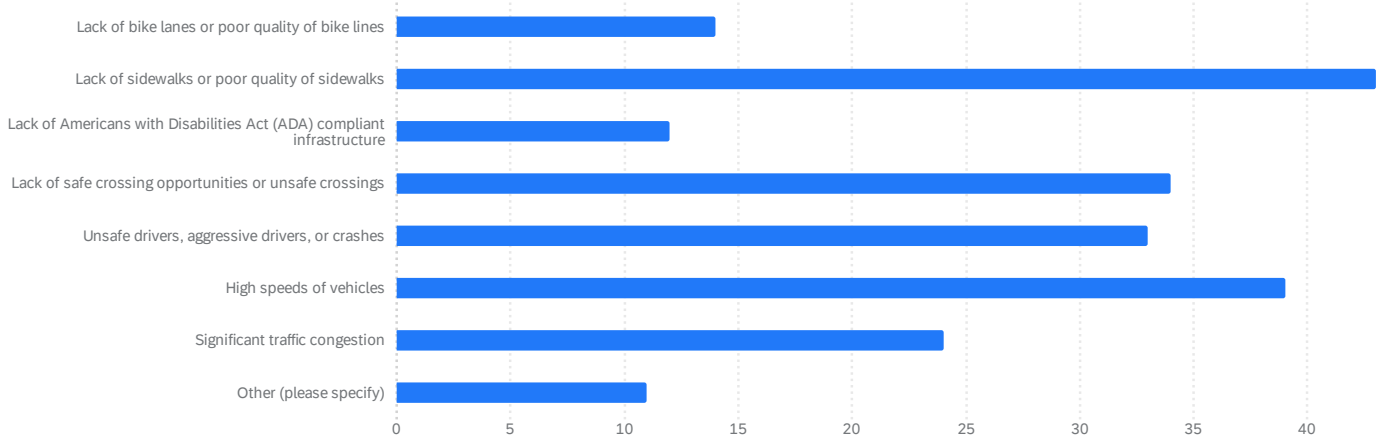
How safe do you feel driving on Route 37? Select only one. 248



How would you rate nighttime driving conditions in the Route 37 corridor? Select only one. 248



What challenges do you experience walking, biking, or using an assistive device on Route 37? Select all that apply. 53



What challenges do you experience walking, biking, or using an assistive device on Route 37? Select all that apply.: Other (please specify)

Drivers don't seem to be expecting pedestrians - ie, make right turn without stopping when light is red

SidewLks are in extremely poor condition. Homeowners need to maintain shrubs and trees that are over grown where you need to duck under low lying branches or step out onto the street to pass. Sidewalk conditions are unsafe while walking, many trip hazards. Sidewalks need to be replaced in many areas walking north between West street and Washington street

None

Constant speeding drivers and trucks.

There needs to be lights at Peach and Wildwood! My neighbor was hit and killed at Wildwood/rt 37 while trying to cross.

Drivers not stopping at marked crosswalks for pedestrians

The crossing lights at five corners does not stop all traffic as it should. As a parent who has a child that walks home from Braintree High School, I am extremely concerned about my child crossing to get home and aggressive or distracted drivers not following no turn on red signs or going through red lights as he's trying to cros

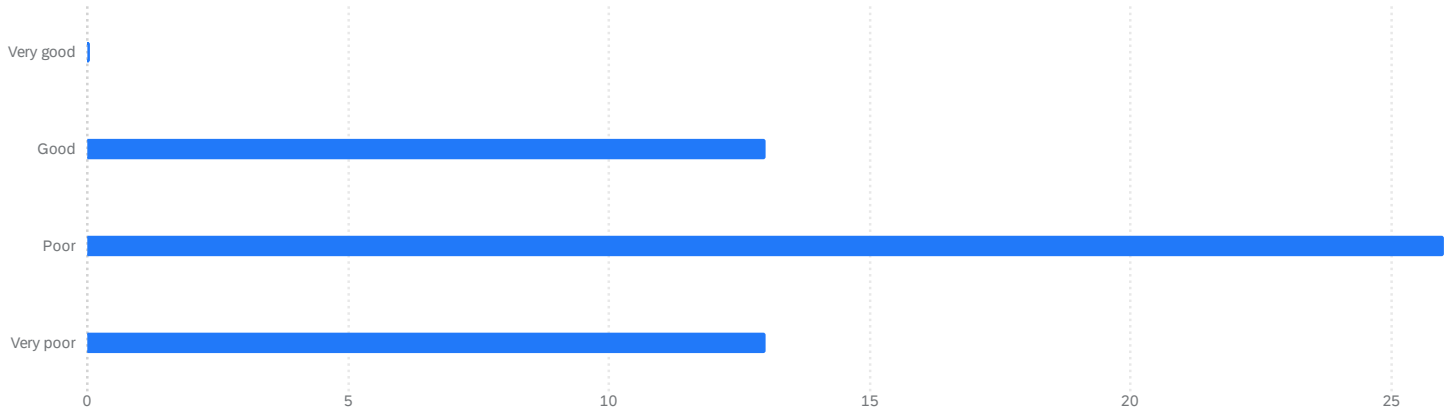
Overgrown bushes and trees that hang onto the sidewalk

Blind corner at South Braintree Square

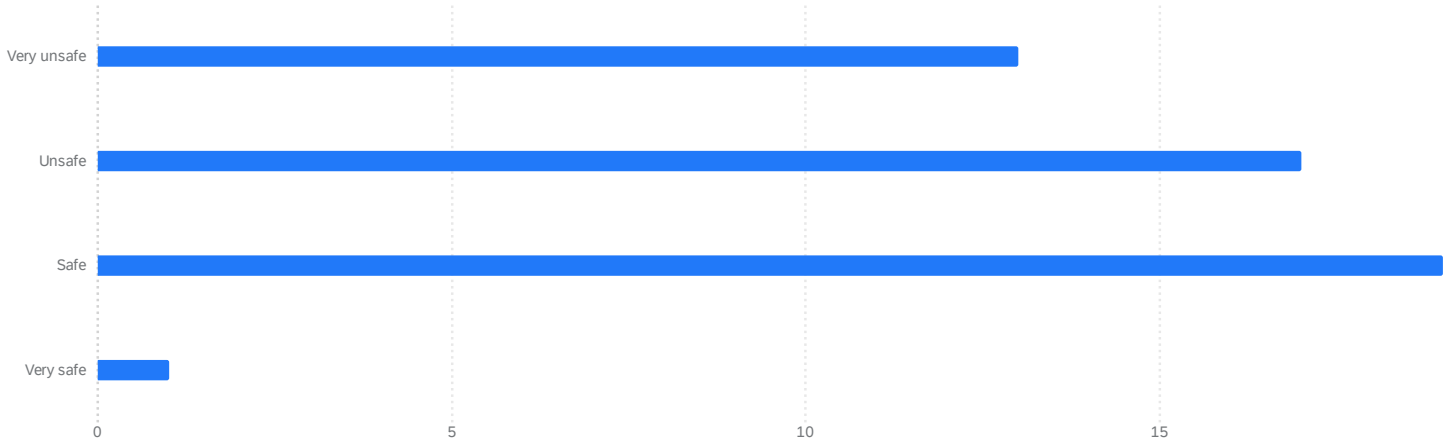
Crosswalk buttons often don't work

poor access to crosswalk button, broken crosswalk buttons,

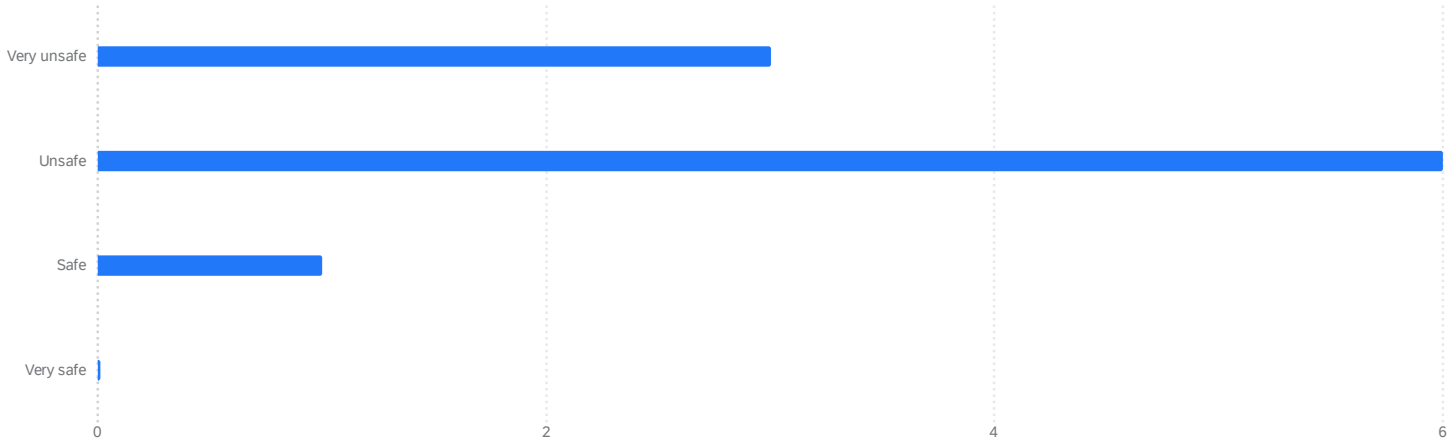
How would you rate the nighttime conditions when traveling along Route 37 by foot, bicycle, or using an assistive mobility device? Select only one. 52



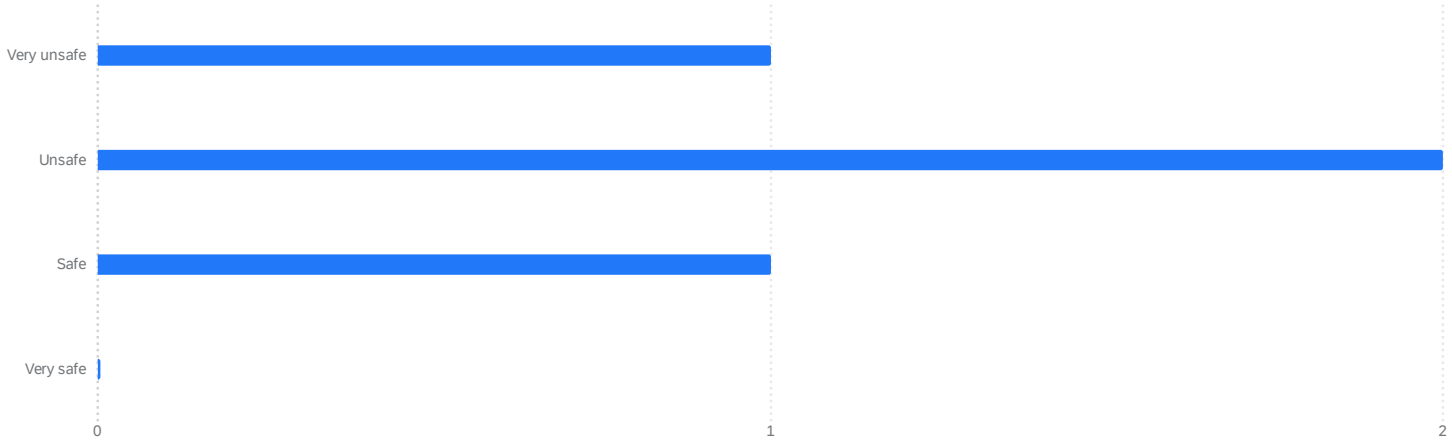
How safe do you feel walking or using an assistive mobility device on Route 37? Select only one. 50



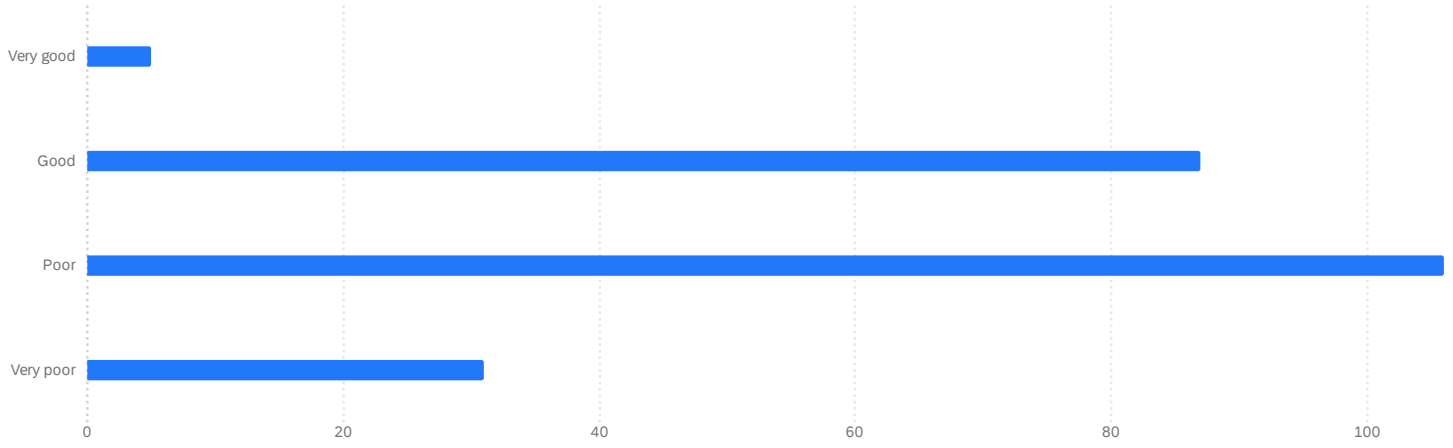
How safe do you feel riding a bike on Route 37? Select only one. 10



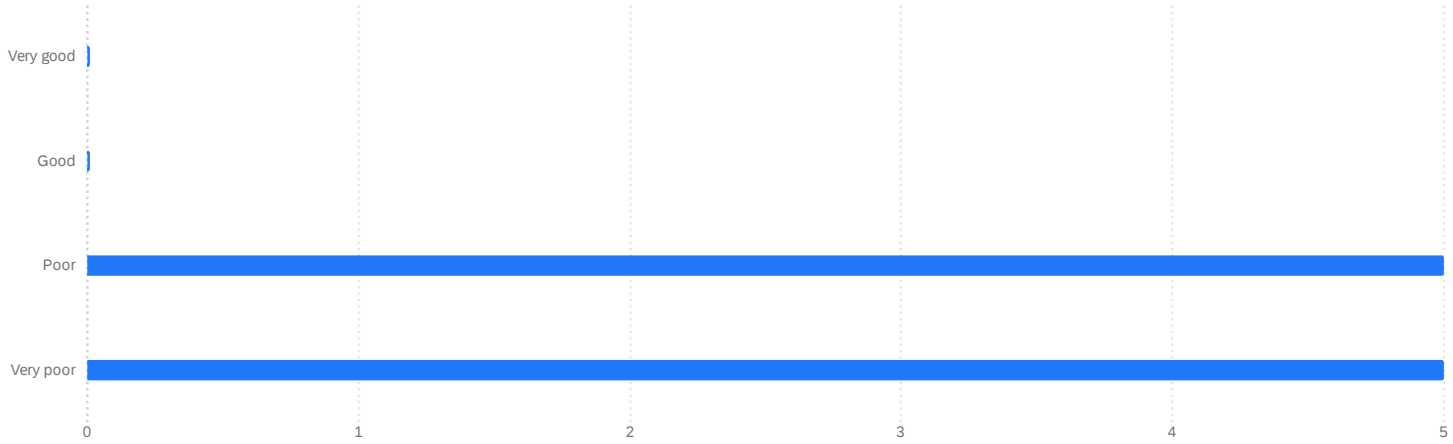
How safe do you feel taking the bus on Route 37? Select only one. 4



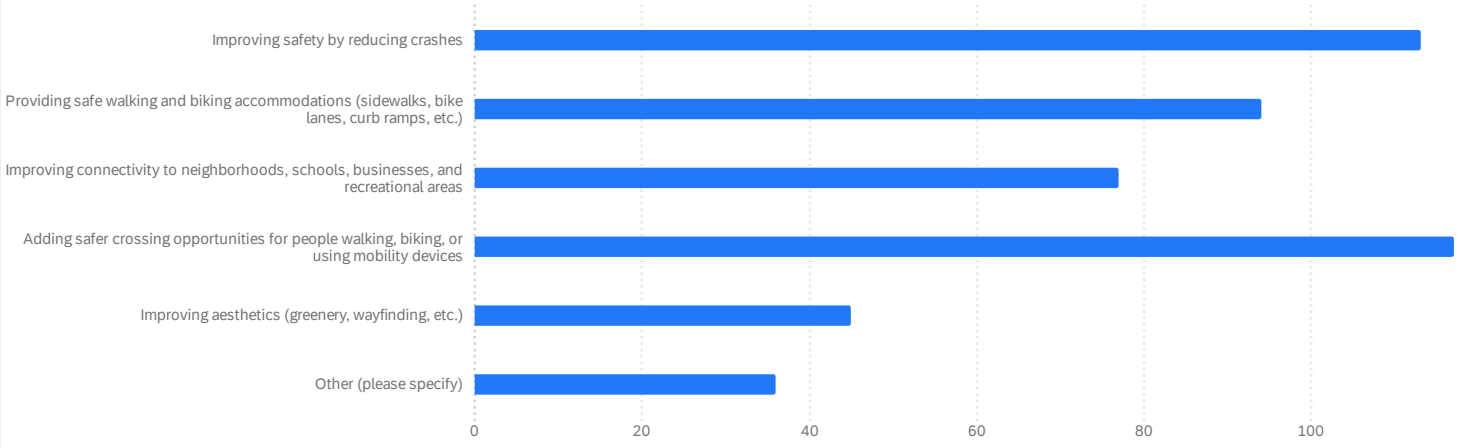
How would you rate the condition of sidewalks along Route 37? Select only one. 229



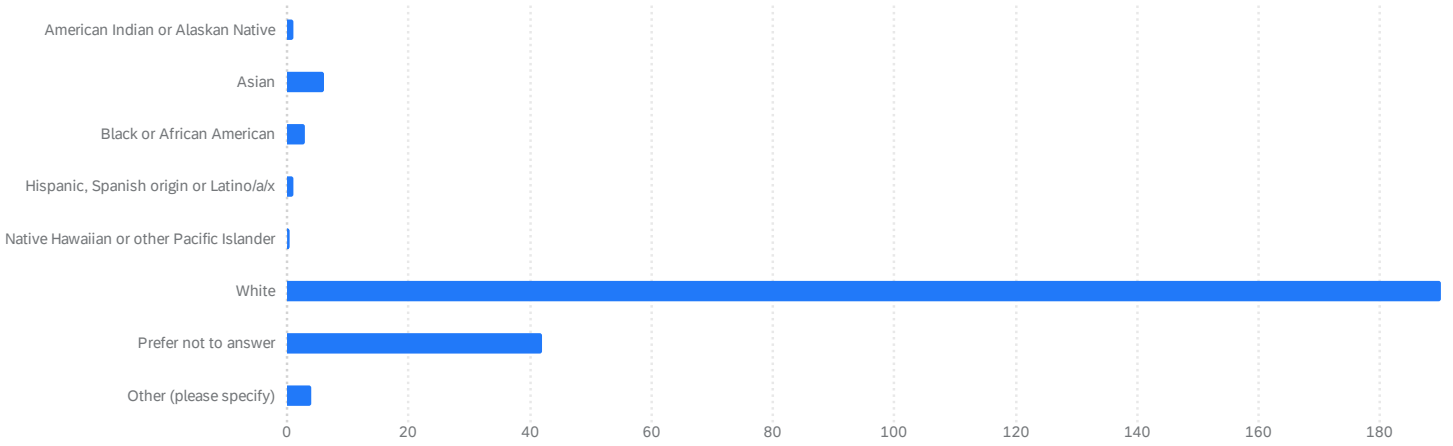
How would you rate the condition of bike lanes or space for biking on Route 37? Select only one. 10



What are two significant ways you would like to see Route 37 improved? Select only two. 241


Improving safety by reducing crashes
Providing safe walking and biking accommodations (sidewalks, bike lanes, curb ramps, etc.)
Improving connectivity to neighborhoods, schools, businesses, and recreational areas
Adding safer crossing opportunities for people walking, biking, or using mobility devices
Improving aesthetics (greenery, wayfinding, etc.)
Other (please specify)
0
20
40
60
80
100

How do you self-identify by race and/or ethnicity? (Check all that apply.) 241



How do you self-identify by race and/or ethnicity? (Check all that apply.): Other (please specify)

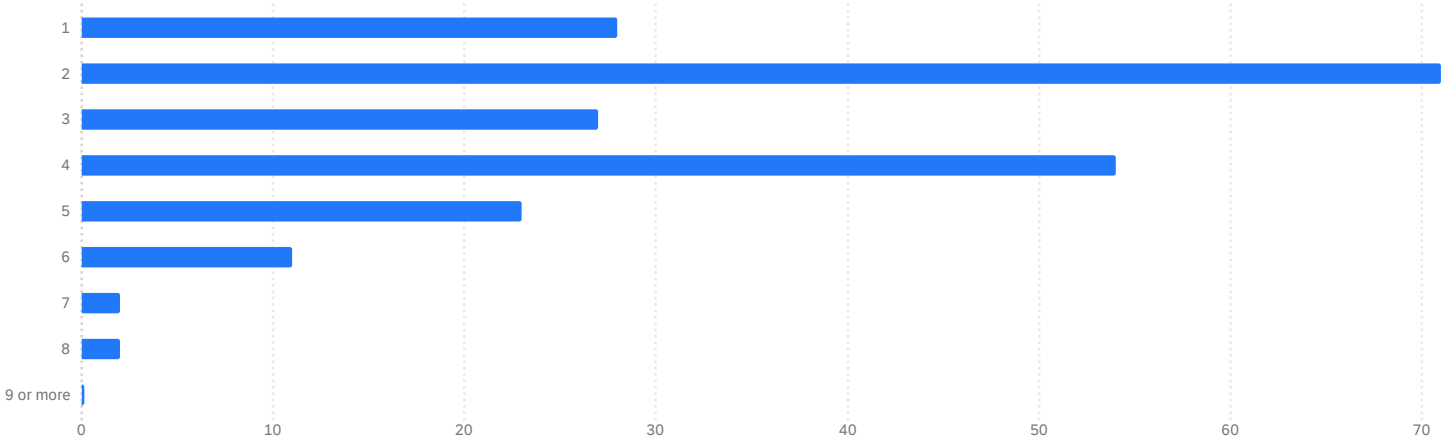
N/A

European

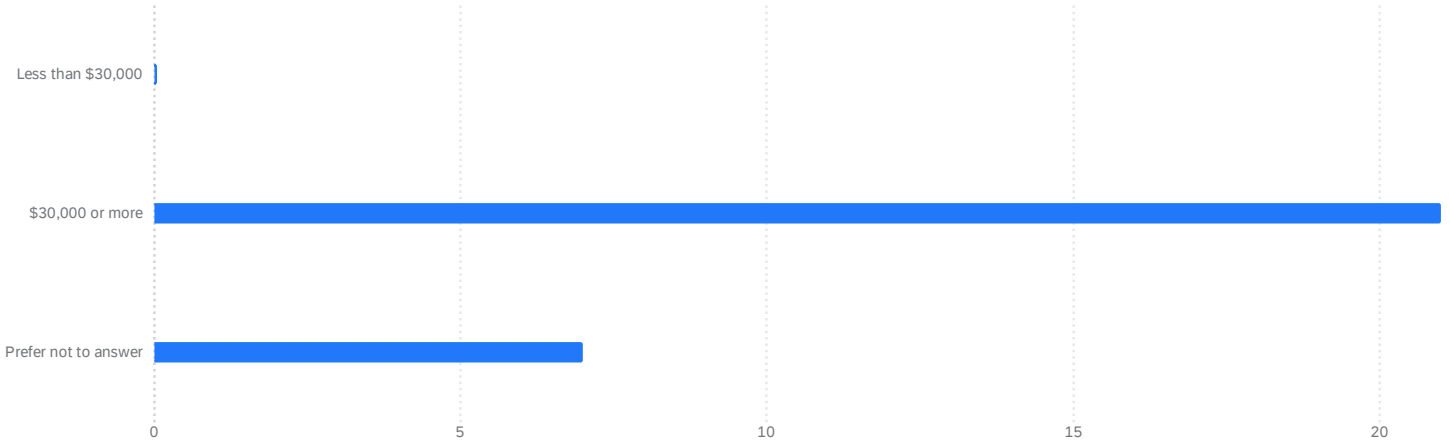
American

American

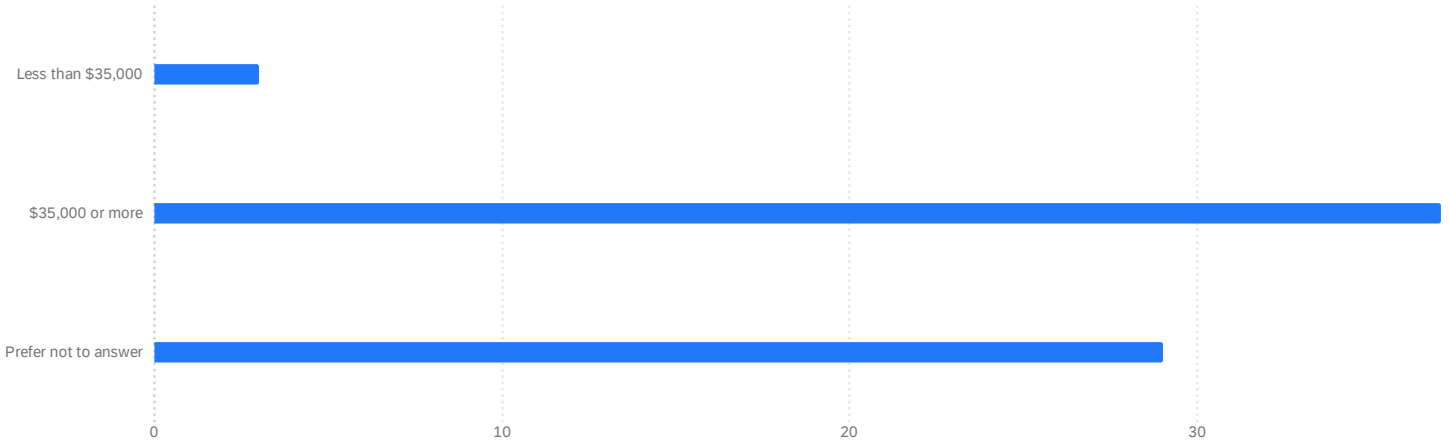
How many people are in your household? Include yourself. 218



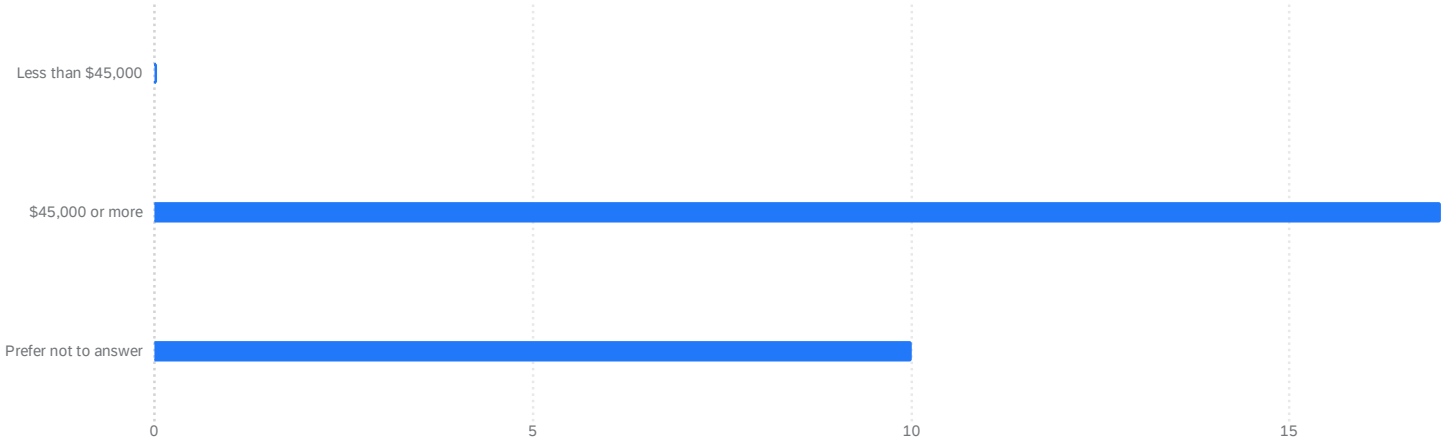
What is your annual household income? 28



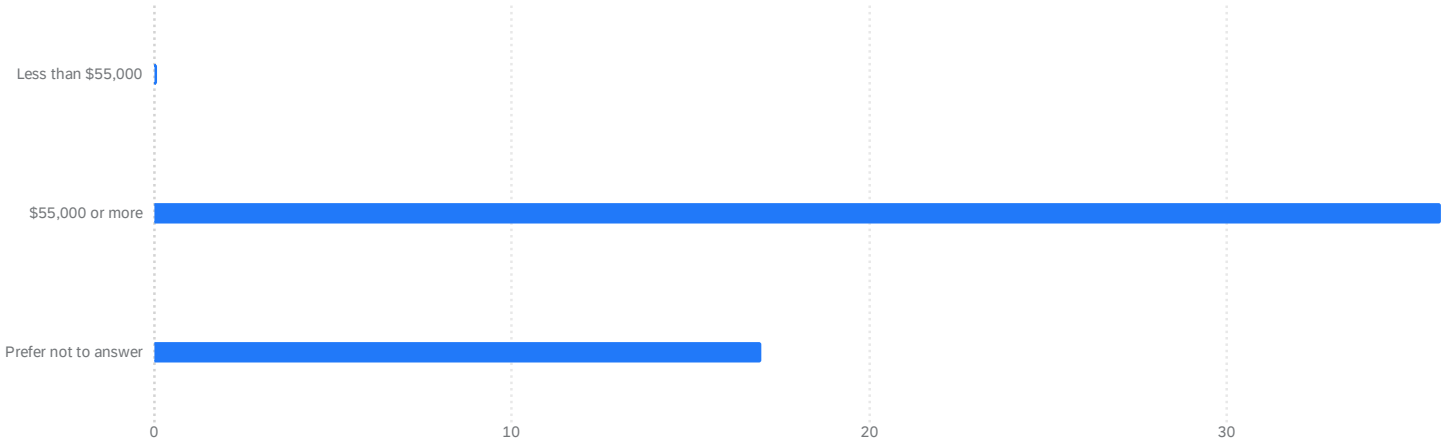
What is your annual household income? 69



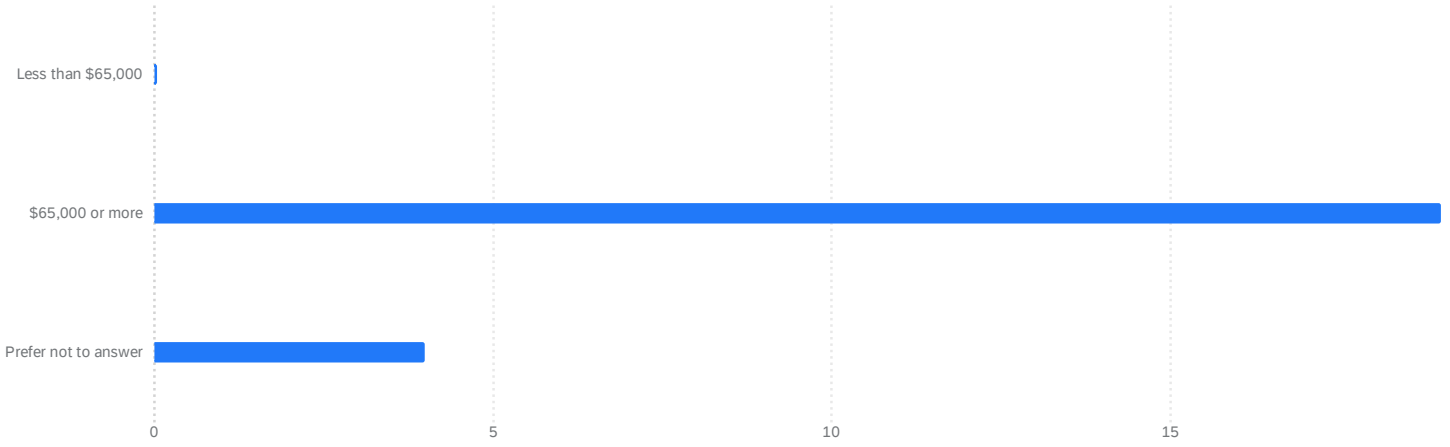
What is your annual household income? 27



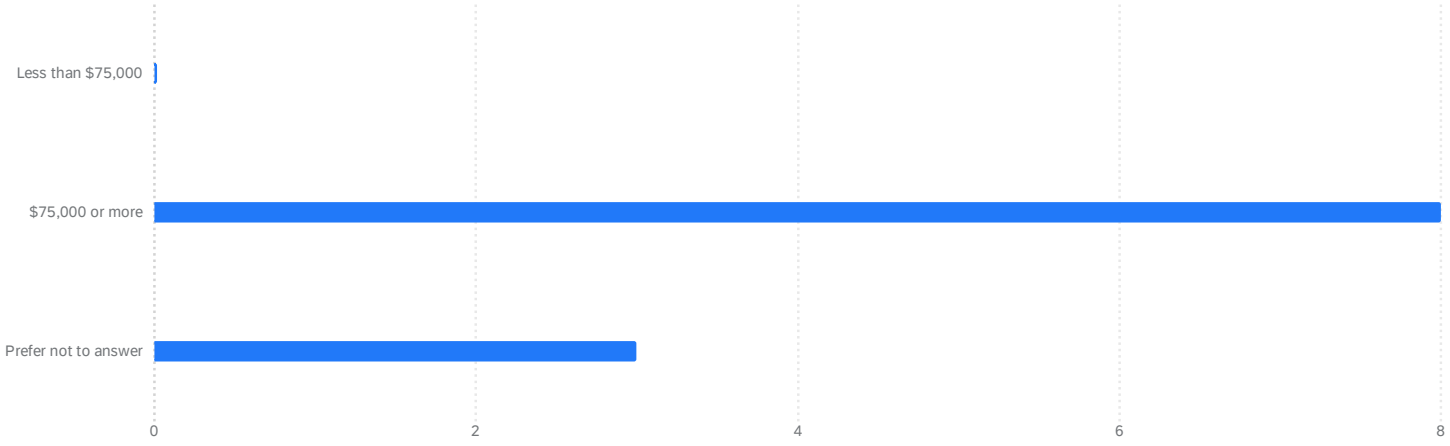
What is your annual household income? 53



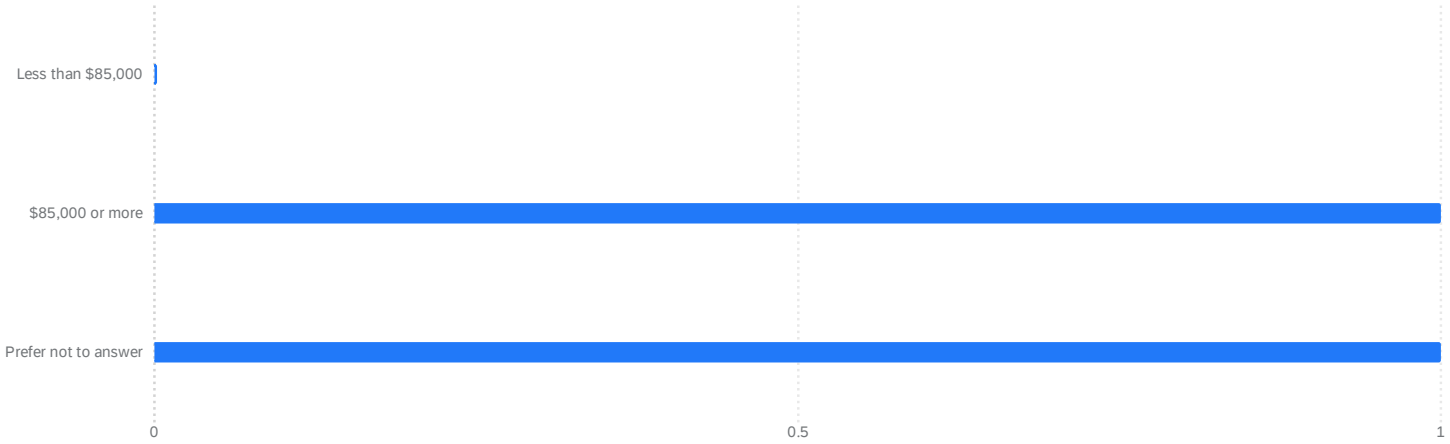
What is your annual household income? 23



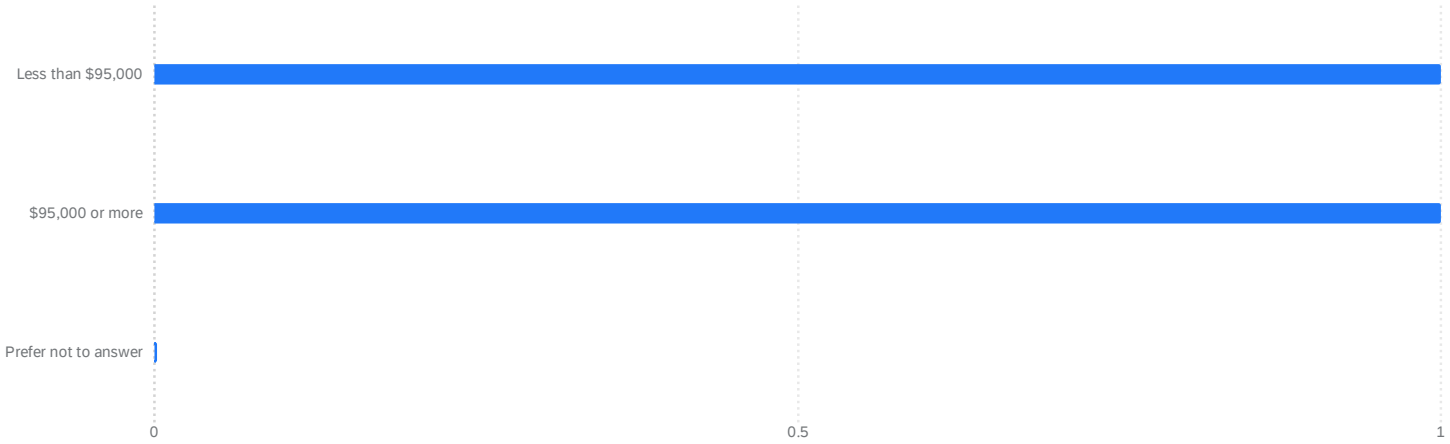
What is your annual household income? 11



What is your annual household income? 2

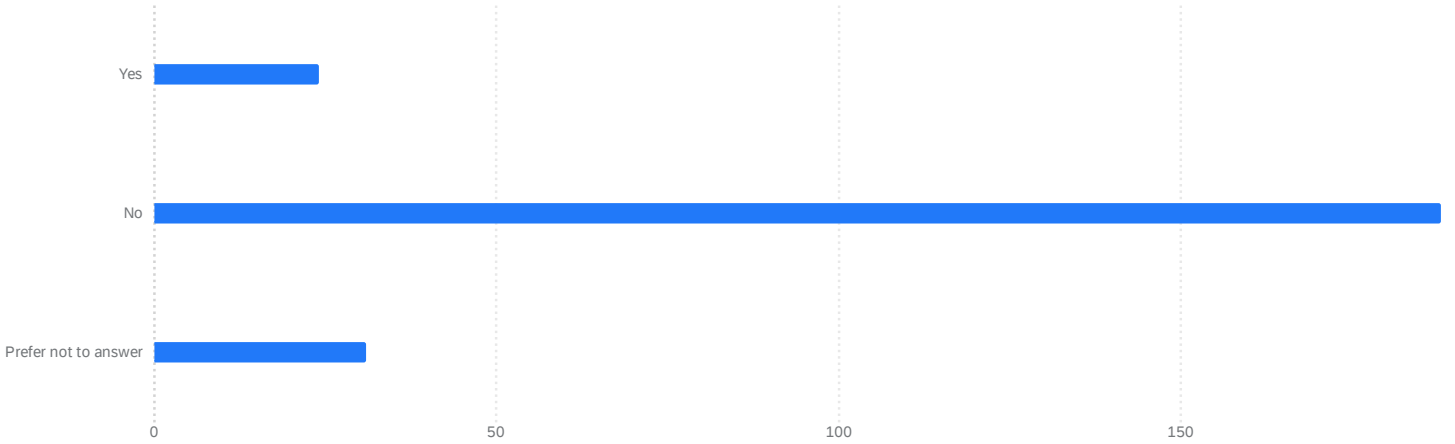


What is your annual household income? 2

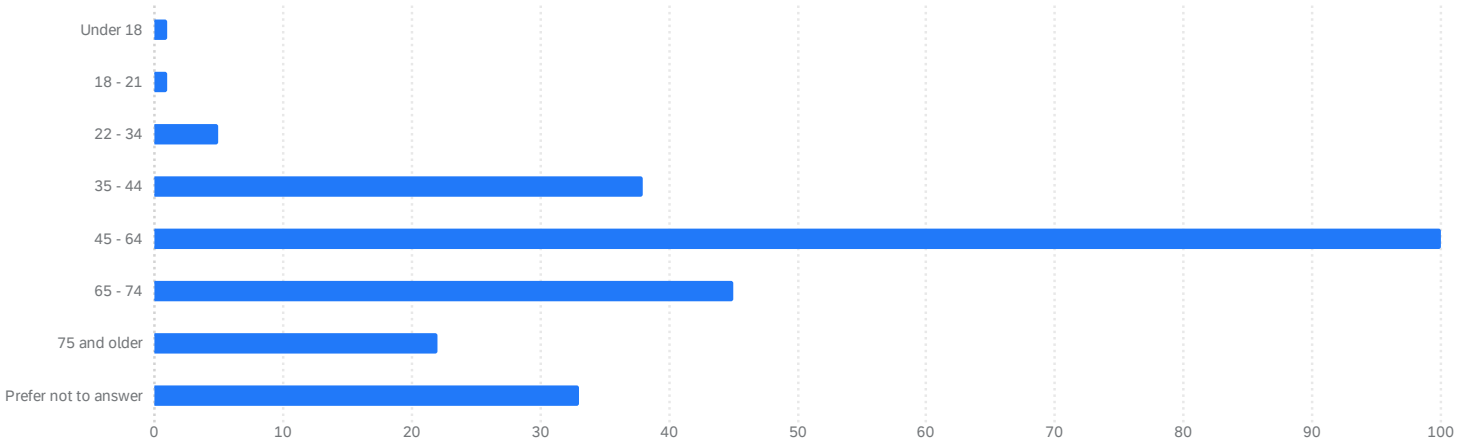


What is your annual household income?

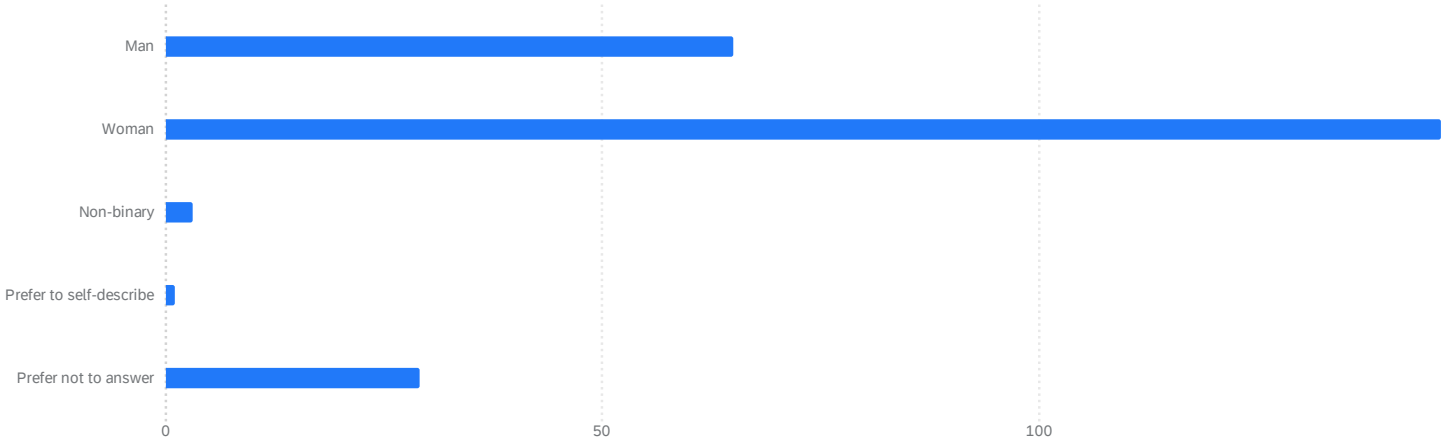
Do you have a disability? 243



What is your age? 245



How do you identify by gender? 244



How do you identify by gender?: Prefer to self-describe

still deciding

Specific Comments from the Community Survey

Granite Street

Enforce traffic laws, particularly drivers running red lights at the intersections with entrances/exits to the South Shore Plaza. Drivers traveling on Rt37 consistently run the red lights at the Forbes Road/Common Street intersection, especially going northbound toward I-93. I frequently enter Rt37 from Common Street at this intersection and always hesitate for fear of drivers ignoring the red light. I presume that there is a similar problem at the other entrances to South Shore Plaza.

Five Corners

1. Stop the speeding to & from the lights at Five Corners. Too many cars speed up to make the changing lights (green to red) & speed up (jockey) as the lanes reduce from 2 to 1 at the end of Messina Plaza 400 Franklin St.
2. Traffic is the worst during AM and PM rush hours. The new light system at 5 Corners has helped greatly with moving traffic.
3. The traffic flow here is terrible. The division of traffic lanes is outdated. This worked well about twenty years ago. Also, the five corners intersection could use an update, Rotary?? There are so many things that could be updated on the whole of RT 37.
4. The Braintree Five Corners area needs improvement with better lighting, improvement with better street marking materials instead of paint with thicker strip-like materials and sturdy lighting fixtures instead of lanterns that sway back, forth and around. Better crossing for pedestrians with pics on poles that signal when it is safe to cross.
5. Traffic near the mall, at 5 corners, and by the intersection of Washington St and Hancock St are an absolute nightmare in the evening commute hours. There are days it takes me longer to travel the roughly 4 miles from the mall area to my house (in Braintree Highlands) than it does to travel the 12 miles from my office in Boston to the mall. I don't know how much can be done to alleviate this mess, but something has to be done.
6. Traffic lights at West St coming from Randolph should have their own dedicated light just like the other side of West Street. Traffic gets backed up b/c there is little time to take left turns into Granite St.
7. Need to have more police enforcement of speeders between Five Corners and Plaza. No biking accommodation. The road lanes are already too narrow for bike lanes. Safety and police enforcement of speeding should take a priority over greenery. Traffic lights are often mistimed or not working properly, especially at the south mall entrance.
8. Five Corners is incredibly unsafe for walkers. When a walker presses the button to cross, not all lights stay red. All traffic should be stopped before any crossing light tells a walker it’s safe to go. Drivers blow through red lights ALL THE TIME! Again, making it unsafe for walkers to walk when the light allows them too. Also, the lights at the Plaza and Forbes Rd., drivers everyday blow through the red lights at a high rate of speed so much so that other cars have a green light. It’s only a matter of time before there is a horrific accident. The speeding at night especially on the weekends on Granite St. is extremely dangerous as well.
9. Five Corners is very dangerous no matter what time of day, especially if someone is trying to turn left onto West St (from either direction on Granite). Significant traffic delays on Granite Street down by the malls during rush hour. Traffic backs up so bad sometimes it takes so long to get through that area.

Franklin Street and Leroy Way Intersection (to the Braintree High School)

1. Would love to see a safer means for pedestrian crossings, particularly at the Braintree High School driveway and Wampatuck Rd neighborhood
2. Traffic congestion. Intersection Washington/Hancock a bottleneck. Light at Thayer athletic fields add significantly to congestion at rush hour or is unnecessary (I've had to stop at that light at 9:00 PM on a Sunday).
3. Cars parked on the sidewalks on either side of Franklin St make walking or riding bikes nearly impossible
4. Why isn't there a red light with flashing lights to cross 37 to Braintree High like Thayer has on Washington St? So many people driving so fast they couldn't stop if they wanted to, my husband, dog and I were almost hit in the crosswalk when I was wearing a walking cast because I couldn't run fast enough
5. Widening road for left turn lane at access road to BHS

Summer Street/Central Street Intersection

Major issue at the intersection of Franklin & Central Ave. I've witnessed numerous car crashes and near misses. Barriers to visibility due to shrubbery, lighting & speed of vehicles seem to be the causes of these accidents. Also, this street is used as "cut-through" for emergency vehicles (primarily Fire Trucks) the on-coming traffic driving on Franklin don't see them coming. It would be a great idea to consider a blinking light at this intersection to especially allow for an emergency signal to stop traffic. Adding a crosswalk would also be beneficial to make traffic stops to allow pedestrians to cross safely to be able to visit Sunset Lake, the Cemetery & Braintree High School up the street.

Washington and Pond Street Intersection

The intersections of Washington St and Pond St, Hancock St and Pearl St, and Hancock St and Franklin St are also awful during the afternoon rush. Cars are constantly blocking those intersections by intentionally pulling into the middle of the intersections right before (or as) the lights turn red, with nowhere to go, causing terrible backup and congestion. There are never any consequences for this, from what I see.

Washington Street, Hancock Street, and Plain Street Intersection

1. Would love to see better traffic signal systems and pedestrian crossings at the intersection of Hancock St and Plain St. Need to do something about lights at Plain Street the traffic backs up from Holbrook to that light and that is over a mile!
2. The traffic lights need to be improved and the busy intersections should be monitored for safety. The intersection at Hancock St, Washington St and Plain St is very unsafe, but simple changes would help improve the situation. For cars approaching the intersection from Plain St, there are two sets of traffic lights, and one turns red we'll before the other. They should be synched. It would also help a great deal to add a left arrow light for drivers turning left onto Hancock from Plain. The timing of the left turn arrow is not great for drivers turning left from
3. Hancock onto Washington. For some cycles, the left turn arrow is green for much too short a period of time. For other cycles, especially during the afternoon rush, the left turn

arrow doesn’t turn green at all. This creates a lot of backups on Hancock St, but it also creates dangerous situations when drivers either run the light or change lanes quickly to go straight on Hancock so they can turn left at a different intersection farther north.

4. Sidewalks are the worst in Braintree. Town hall indicates the State holds up road & sidewalk repairs. Engine breaking by trucks is horrible (northbound, intersection Hancock & Plain). Traffic backs up daily! We hear empty trucks in the morning (4-6) banging along the road.
5. Improvements needed to intersection with Hancock St, Plain St, by the train tracks and Dunks. This intersection is the worst. The frequency of drivers running red lights is terrifying. And during peak driving times, there are often instances where drivers are blocking the intersection so lanes with a green light cannot proceed. Along all of Rt. 37, in my opinion, this intersection is the most dangerous, primarily due to drivers running red lights. I am very happy that there is now a traffic light at the intersection of Rt 37 and South Street. This has been a huge improvement.
6. Traffic congestion. Intersection Washington/Hancock a bottleneck.

Washington Street and Braxton Street Intersection

1. A beautiful boy was killed because he had to step into the street, while walking home from work, because there is inadequate space for pedestrians at the railroad underpass. Poor town planning killed Lucas as much as the driver.
2. Commuters travelling on 37 N in the morning are still speeding through Old Washington Street to cut through some of the route 37 congestion regardless of posted no entryway signs.
3. A traffic light coming out of highlands neighborhood into Route 37
4. Need sidewalks near Thayer Academy skating rink on Route 37. People are always walking/biking on the street there and it is dangerous.
5. The intersection at Peach St is atrocious. A traffic light is needed! Perhaps it can be timed with the one a little up the street at Braintree Business Park (Thayer Athletic
6. Light at Thayer athletic fields add significantly to congestion at rush hour or is unnecessary (I've had to stop at that light at 9:00 PM on a Sunday).

Granite Street and Peach Street Intersection

1. Would love to see traffic signals installed at Peach St. The traffic on Route 37 in the morning and afternoon commutes is too much! People in the Highlands area (South, Wildwood, Peach) can barely get out of their streets and the light at Dunkin intersection is ridiculously short! Getting from the highlands to high school in the morning, via Route 37, to Pond St, to Town Street is truly ridiculous!
2. Light at Peach Street and Route 37. Install a traffic signal at Peach Street intersection. Improve signal synchronization and progression between Wood Rd. and Five Corners.
3. Entering Route 37 from Peach Street used to have enough space for cars to merge left or right on to 37. Someone decided it was better to extend the sidewalk curb. This small change backs up traffic onto Peach Street. Horrible decision.
4. I think a traffic light is needed at Peach St and Route 37. It is a risk trying to take a left onto Route 37 southbound especially since the road is not flat and you can't always see cars coming south. A light was put in farther down on Route 37 after a motorcycle accident. Let’s not wait for another motor vehicle accident. Also, a wide median strip was put in where Peach Street and Route 37 meet so that only one lane can approach 37.

There are significant backups on Peach Street while waiting for drivers taking a left to make a safe turn.

5. Lots of kids bike and walk area...need to make crosswalks and sidewalk safer none. Intersection at Peach Street should have a traffic light 🚦 provide traffic enforcement, especially for the people who can't put their PHONES down. Something at the end of Peach Street to improve morning and end of work/school day ability to turn onto Route 37
6. My son n was killed by a hit and run drunk driver on Dec 15, 2018. He was struck, walking from the T. He was on the very narrow stretch of sidewalk heading south, by the Thayer Field entrance, somewhat across from Peach St. It is an MBTA bus route the 230 bus and the sidewalk end by the field entrance, only to continue about 500 feet further down by JT Auto. The driver went up on the curb and struck my boy going back onto the road. He WAS convicted. I see many walkers, including myself, going this same route. My boy's name is Lucas Flint, my name is Susan M. Flint. This sidewalk/roadway needs to be remedied, soon.
7. Set of lights at Peach remove at Braxton.

Park Street and Standish Avenue

1. Route 37 is like a highway. Even with the set of lights at Standish/Park and 37, I feel pedestrians are at risk crossing. Several people in the past have been killed at that location.
2. Easier ways to pull out of side streets. I live on Wildwood Avenue and taking a left onto Route 37 is so dangerous.
3. Due to the heavy traffic on Route 37, drivers cut through the Highlands, especially on Highland Ave, ignoring the few speed signs, driving at 40+ mph and endangering walkers, bike riders, our many children and seniors. Other cut through streets are Cain Ave and Bradford. This needs to be addressed before someone is seriously injured.
4. Children must be driven across Route 37; cars do NOT stop at crosswalks. If they do cars from behind often go around stopped cars or rear end them. This happens every day in the highlands. I have to wave my hands in the air to get cars to stop. Need more flashing pedestrian lights around Waldron rd. area.
5. I walk every day on Route 37. I always cross at the lights at Washington and Park Ave, every single day, some car runs the stop light there.
6. South Braintree Square is a bit of a pedestrian nightmare...way too many barriers to step over or walk around, and traffic is pretty oblivious to the possibility of pedestrians. Area at Brewster to Arbutus, also known as Dead Man's Curve, is extremely dangerous and something needs to be done about it. Distracted drivers and speeding drivers have resulted in several accidents and dozens of near misses.

Washington Street and South Street Intersection

1. I am very happy that there is now a traffic light at the intersection of Route 37 and South Street. This has been a huge improvement.
2. The area from Park Ave to the new light near CATS academy is very dangerous. People drive very fast. My kids have friends in the neighborhood across Route 37 and I have to drive versus letting them walk because I'm worried.

Washington Street at Roosevelt Street Intersection

There needs to be better speed enforcement from the Holbrook line to Peach Street. it's a straightaway that leads to a dangerous curve and people go way too fast.

Corridor wide

1. It would be great if the traffic signals were better coordinated to move peak commuting traffic through the corridor more efficiently, particularly between Plain St and the Holbrook line in the AM/PM peak hours. Traffic lights should be coordinated to all run green/red at same time to flow traffic
2. Definitely increasing trees along the roadway will improve the quality of life, this action is not only for aesthetics. Adding safer crossing opportunities will improve the accessibility of the roadway. Speed enforcement and police guiding traffic at intersections will cut down on cars running lights and aggressive driving.
3. More traffic enforcement to curb aggressive drivers who mostly speed and pass unsafely by turning cars on the right. Lower speed limit for driving and increased enforcement of traffic laws.
4. Monitor the speed limit better. 35 mph should be the max along that entire stretch of Route 37. Please, no more traffic lights. When I moved here there was one traffic light at the intersection of Plain, Hancock and Washington. Now there are 4 additional traffic lights. Police patrol the red-light abusers. To many drivers, a red light is only a suggestion. Many motorists drive through red lights. They view red lights, yellow lights, yield signs, etc. as suggestions, no rules of the road. There aren't any police around to make these drivers accountable.
5. We moved to Braintree 37 years ago & the sidewalks on Route 37 where I walk have never been done over. I am talking about from Braintree 5 corners to the corner of where Wahington St & Hancock St. meet up near the Dunkin Donuts & Lychee Restaurant. 30 - 37 years ago My Dad walked my children in their strollers & tried his hardest to stay away from the area I just mentioned even if it meant that it would take an extra 10 - 15 mins. to avoid this area & go around where the sidewalks were much better. 37 years is a long time to have to complain about the bad & dangerous condition of these sidewalks. Now I walk my granddaughter in this same neighborhood & I try to stay away from it. I bet if a politician lived in this area, the sidewalks would have been fixed years ago.
6. Sidewalks need to be replaced; they are very unsafe to walk. Ability to get out of side streets. Make sidewalks wider and install grass strips along curb. Sidewalks are crumbling, forcing people into streets, no enforcement of parking on sidewalks, no snow removal or leaf removal on Route 37, crosswalk buttons along Route 37 don't work. No bike infrastructure, out of reach crosswalk buttons blocked by guardrails, lack of bike lanes to use as sidewalk alternative for wheelchair users, poor lighting at night, no audible crosswalk buttons except at Five Corners. (even when new buttons were installed by Franklin St and Safford St by Sunset Lake). Missing segments of sidewalk and/or curb cuts along Granite St.
7. Route 37 from Plain St to Holbrook is one of the most dangerous stretches of road that I have driven. Speed, aggressive driving & the amount of traffic makes it a nightmare
8. Speed is a concern as cars fly down the grade coming from Holbrook towards Park and Wildwood intersections

9. The speeding of tractor trailers, trash trucks, buses and mopeds in breakdown lanes and passing on double solid lane markings.
10. Cutting back the trees and bushes or making the homeowners responsible for cutting them back as they hang onto sidewalk making it impassable in some areas.
11. Aggressive drivers between 5am and 7pm especially during commute hours. People pass in no pass areas and constantly run red lights especially in the morning at the plain street intersection. The volume of traffic in general has significantly increased at all hours because Braintree is a cut through for Randolph, Holbrook, and several Route 18 towns. I live across from CATS Academy and the intersection coming out is constantly blocked despite signs saying do not block intersection. There is not much that could be done without disrupting the neighbors who have already been inconvenienced due to the increased volume of traffic.
12. Sidewalks are inconsistent on Granite Street. They will be only on one side of road for stretches and it switches sides with no crosswalk.
13. I don’t really know what this selection objective is. But I’d suggest reducing vehicle traffic by promoting walking and adding municipal/remote parking lots and signage.
14. The sidewalks and areas around Route 37 have been improved over the years. I guess more could be done but there are surely other areas in Braintree that could benefit more from infrastructure upgrades. For example, access to / from the T and increased parking. Under the bridge walking down to the T it is always wet and puddled - annoying part of the year but a problem when icy.
15. Less traffic and seeing the town implement the speed limit
16. Many of the crosswalks have pedestrian traffic lights that don't work.

Appendix G:
MassDOT Highway Division
Project Development
Process

Overview of the Project Development Process

Transportation decision-making is complex and can be influenced by legislative mandates, environmental regulations, financial limitations, agency programmatic commitments, and partnering opportunities. Decision-makers and reviewing agencies, when consulted early and often throughout the project development process, can ensure that all participants understand the potential impact these factors can have on project implementation. Project development is the process that takes a transportation improvement from concept through construction.

The MassDOT Highway Division has developed a comprehensive project development process which is contained in Chapter 2 of the *MassDOT Highway Division's Project Development and Design Guide*. The eight-step process covers a range of activities extending from identification of a project need, through completion of a set of finished contract plans, to construction of the project. The sequence of decisions made through the project development process progressively narrows the project focus and, ultimately, leads to a project that addresses the identified needs. The descriptions provided below are focused on the process for a highway project, but the same basic process will need to be followed for non-highway projects as well.

1. Needs Identification

For each of the locations at which an improvement is to be implemented, MassDOT leads an effort to define the problem, establishes project goals and objectives, and defines the scope of the planning needed for implementation. To that end, it has to complete a Project Need Form (PNF), which states in general terms the deficiencies or needs related to the transportation facility or location. The PNF documents the problems and explains why corrective action is needed. For this study, the information defining the need for the project will be drawn primarily, perhaps exclusively, from the present report. Also, at this point in the process, MassDOT meets with potential participants, such as the Metropolitan Planning Organization (MPO) and community members, to allow for an informal review of the project.

The PNF is reviewed by the MassDOT Highway Division district office whose jurisdiction includes the location of the proposed project. MassDOT also sends the PNF to the MPO, for informational purposes. The outcome of this step determines whether the project requires further planning, whether it is already well supported by prior planning studies, and, therefore, whether it is ready to move forward into the design phase, or whether it should be dismissed from further consideration.

2. Planning

This phase will likely not be required for the implementation of the improvements proposed in this planning study, as this planning report should constitute the outcome of this step. However, in general, the purpose of this implementation step is for the project proponent to identify issues, impacts, and approvals that may need to be obtained, so that the subsequent design and permitting processes are understood.

The level of planning needed will vary widely, based on the complexity of the project. Typical tasks include: define the existing context, confirm project need, establish goals and objectives, initiate public outreach, define the project, collect data, develop and analyze alternatives, make recommendations, and provide documentation. Likely outcomes include consensus on the project definition to enable it to move forward into environmental documentation (if needed) and design, or a recommendation to delay the project or dismiss it from further consideration.

3. Project Initiation

At this point in the process, the proponent, MassDOT Highway Division, fills out a Project Initiation Form (PIF) for each improvement, which is reviewed by its Project Review Committee (PRC) and the MPO. The PRC is composed of the Chief Engineer, each District Highway Director, and representatives of the Project Management, Environmental, Planning, Right-of-Way, Traffic, and Bridge departments, and the MassDOT Federal Aid Program Office (FAPO). The PIF documents the project type and description, summarizes the project planning process, identifies likely funding and project management responsibility, and defines a plan for interagency and public participation. First the PRC reviews and evaluates the proposed project based on the MassDOT's statewide priorities and criteria. If the result is positive, MassDOT Highway Division moves the project forward to the design phase, and to programming review by the MPO. The PRC may provide a Project Management Plan to define roles and responsibilities for subsequent steps. The MPO review includes project evaluation based on the MPO's regional priorities and criteria. The MPO may assign project evaluation criteria score, a Transportation Improvement Program (TIP) year, a tentative project category, and a tentative funding category.

4. Environmental Permitting, Design, and Right-of-Way Process

This step has four distinct but closely integrated elements: public outreach, environmental documentation and permitting (if required), design, and right-of-way acquisition (if required). The outcome of this step is a fully designed and permitted project ready for construction. However, a project does not have to be fully designed in order for the MPO to program it in the TIP. The sections below provide more detailed information on the four elements of this step of the project development process.

Public Outreach

Continued public outreach in the design and environmental process is essential to maintain public support for the project and to seek meaningful input on the design elements. The public outreach is often in the form of required public hearings, but can also include less formal dialogues with those interested in and affected by a proposed project.

Environmental Documentation and Permitting

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Protection Act (MEPA) and the National Environmental Protection Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the **Preliminary Design** phase described below.

Design

There are three major phases of design. The first is **Preliminary Design**, which is also referred to as the 25-percent submission. The major components of this phase include full survey of the project area, preparation of base plans, development of basic geometric layout, development of preliminary cost estimates, and submission of a functional design report. Preliminary Design, although not required to, is often completed in conjunction with the Environmental Documentation and Permitting. The next phase is **Final Design**, which is also referred to as the 75-percent and 100-percent submission. The major components of this phase include preparation of a subsurface exploratory plan (if required), coordination of utility relocations, development of traffic management plans through construction zones, development of final cost estimates, and refinement and finalization of the construction plans. Once Final Design is complete, a full set of **Plans, Specifications, and Estimates (PS&E)** is developed for the project.

Right-of-Way Acquisition
A separate set of Right-of-Way plans are required for any project that requires land acquisition or easements. The plans must identify the existing and proposed layout lines, easements, property lines, names of property owners, and the dimensions and areas of estimated takings and easements.

5. Programming (Identification of Funding)
Programming, which typically begins during the design phase, can actually occur at any time during the process, from planning to design. In this step, which is distinct from project initiation, the proponent requests that the MPO place the project in the region's Transportation Improvement Program (TIP). The proponent requesting the project's listing on the TIP can be the community or it can be one of the MPO member agencies (the Regional Planning Agency, MassDOT, and the Regional Transit Authority). The MPO then considers the project in terms of state and regional needs, evaluation criteria, and compliance with the regional Transportation Plan and decides whether to place it in the draft TIP for public review and then in the final TIP.

6. Procurement
Following project design and programming of a highway project, the MassDOT Highway Division publishes a request for proposals. It then reviews the bids and awards the contract to the qualified bidder with the lowest bid.

7. Construction
After a construction contract is awarded, MassDOT Highway Division and the contractor develop a public participation plan and a management plan for the construction process.

8. Project Assessment
The purpose of this step is to receive constituents' comments on the project development process and the project's design elements. MassDOT Highway Division can apply what is learned in this process to future projects.

Project Development Schematic Timetable

Description	Schedule Influence	Typical Duration
Step I: Problem/Need/Opportunity Identification The proponent completes a Project Need Form (PNF). This form is then reviewed by the MassDOT District office which provides guidance to the proponent on the subsequent steps of the process.	The Project Need Form has been developed so that it can be prepared quickly by the proponent, including any supporting data that is readily available. The District office shall return comments to the proponent within one month of PNF submission.	1 to 3 months
Step II: Planning Project planning can range from agreement that the problem should be addressed through a clear solution to a detailed analysis of alternatives and their impacts.	For some projects, no planning beyond preparation of the Project Need Form is required. Some projects require a planning study centered on specific project issues associated with the proposed solution or a narrow family of alternatives. More complex projects will likely require a detailed alternatives analysis.	Project Planning Report: 3 to 24+ months
Step III: Project Initiation The proponent prepares and submits a Project Initiation Form (PIF) and a Transportation Evaluation Criteria (TEC) form in this step. The PIF and TEC are informally reviewed by the Metropolitan Planning Organization (MPO) and MassDOT District office, and formally reviewed by the PRC.	The PIF includes refinement of the preliminary information contained in the PNF. Additional information summarizing the results of the planning process, such as the Project Planning Report, are included with the PIF and TEC. The schedule is determined by PRC staff review (dependent on project complexity) and meeting schedule.	1 to 4 months
Step IV: Design, Environmental, and Right of Way The proponent completes the project design. Concurrently, the proponent completes necessary environmental permitting analyses and files applications for permits. Any right of way needed for the project is identified and the acquisition process begins.	The schedule for this step is dependent upon the size of the project and the complexity of the design, permitting, and right-of-way issues. Design review by the MassDOT district and appropriate sections is completed in this step.	3 to 48+ months
Step V: Programming The MPO considers the project in terms of its regional priorities and determines whether or not to include the project in the draft Regional Transportation Improvement Program (TIP) which is then made available for public comment. The TIP includes a project description and funding source.	The schedule for this step is subject to each MPO's programming cycle and meeting schedule. It is also possible that the MPO will not include a project in its Draft TIP based on its review and approval procedures.	3 to 12+ months
Step VI: Procurement The project is advertised for construction and a contract awarded.	Administration of competing projects can influence the advertising schedule.	1 to 12 months
Step VII: Construction The construction process is initiated including public notification and any anticipated public involvement. Construction continues to project completion.	The duration for this step is entirely dependent upon project complexity and phasing.	3 to 60+ months
Step VIII: Project Assessment The construction period is complete and project elements and processes are evaluated on a voluntary basis.	The duration for this step is dependent upon the proponent's approach to this step and any follow-up required.	1 month

Source: MassDOT Highway Division Project Development and Design Guide